systematic excavation of the great series of royal tombs a vast store of 000
archaeological data will be forthcoming. This splendid series, the sequence [172]
of which is known in part, constitutes no doubt the most important
archaeological field in Polynesia.

For the location of places mentioned in this paper refer to Tongan 113
Place Names (25).^

POPULATION

CENSUS DATA

The census for the year 1921 taken by the Tongan police in the month 161
of April, lists 23,759 Tongans, 571 Caucasians, 235 half-castes, 235 individuals 162
from other Pacific islands, and 135 miscellaneous non-Caucasian foreigners.

Intermarriage of Caucasians and full-blooded Tongans is less frequent 563
to-day than formerly, although at no time was such intermarriage common.
To all appearances the Tongan population bids fair to maintain itself in [144]
strength of numbers and purity of blood indefinitely. This situation seems [671]
insured by the fact that ownership of land by foreigners is effectually prohibited by law. [423]

It is the opinion of the late Reverend J. B. Watkin, formerly President of the Free Church of Tonga, and a man who could speak with authority because of his long residence in Tonga, that the population of the three main island groups of Tonga—Tongatabu, Haapai, and Vavau—has never exceeded 25,000; an opinion with which I have reason to concur. 161

The estimate of the Wesleyan missionaries in 1840, cited by Commodore Wilkes (63, vol. 3, p. 29) allows only 18,500 for the population of the whole archipelago, including the outlying Niuatoputapu and Niuafoou islands. It is possible that this is an underestimate, though it must be remembered that the country was still suffering from the internecine wars which began about the end of the eighteenth century. In Table 1, Wilkes' figures for 1840 are given with those for other years up to 1921. For 1922 no detailed figures have been obtained, but according to Stronge (52, pp. 6-7) the excess of births over deaths for that year was 359, which would make the total Tongan population more than 24,000.

ANCIENT DISTRIBUTION OF POPULATION

Tradition speaks of a time when it was possible to communicate from 161
one end of Tongatabu to the other by calling from one farm to another, a 162
state of affairs described as *fanongonongo tokoto* (making proclamation 203
when reclining). Some writers have inferred from this tradition that the 173
population must have been much denser than that of to-day. The area of 000

^ /See 4: Gifford for this source -- Analyst/

The area of
Tongatabu, however, probably does not exceed 150 square miles, which on 161
the basis of full-blooded Tongan population, in 1921, gives the average of 65 162
individuals to the square mile, a number probably sufficient for communication [131]
in the traditional way, if the bulk of the population fringed the ancient [491]
highway which ran from end to end of the island. It should be borne in [361]
mind that the ancient population lived largely on farms rather than in villages. [764]
Ancient burials are to-day found in the bush where farms once flourished.

Cook (19, vol. 1, p. 297) mentions an assemblage at an entertainment 175
on Tongatabu Island, concerning which "some of us computed, that, at this 161
time, there were not less than ten or twelve thousand people, in our neighborhood; 162
that is, within the compass of a quarter of a mile; drawn together,
for the most part, by mere curiosity." Providing the total is not overestimated, this statement would seem at first glance to indicate a larger population for Tongatabu Island than that of the present day. But many people from neighboring islands of Tongatabu and from Haapai and Vavau were doubtless present. In reference to the population of the islands near Tongatabu in 1797 the following quotation from Wilson (65, p. 95) is pertinent: "Passing to the northward of Eoo-āije, we steered W.S.W. to the entrance, then W. by S. and W. up the harbour, followed by the above canoe and several others, which put off from the eastern part of the main island and the islets that lie scattered upon the reef."

The statement of Cook (19, vol. 1, p. 246) that "at least three thousand people" assembled at the entertainments on Lifuka Island indicates a population in 1777 no greater than in 1909 when Lifuka and the neighboring islands Foa and Haano had a population of 3,565. With the rest of Haapai to draw upon as well, a crowd of three thousand people might be assembled readily enough. Cook's description of the island of Mango suggests that the population in 1777 did not much exceed the population of 42 individuals in 1906 and it is of interest to note that he found Uoleva Island, just south of Lifuka, as destitute of inhabitants as it is to-day.

The grouping of people in villages and the consequent desertion of farms 175
as residences has taken place probably since 1773, when Cook (18, vol. 1, 162
p. 213) described the country as follows: 361

> The produce and cultivation of this isle [Eua] is the same as at Amsterdam [311]
> [Tongatabu]; with this difference, that a part only of the former is cultivated, whereas
> the whole of the latter is. The lanes or roads necessary for travelling, are laid out [491]
> in so judicious a manner, as to open a free and easy communication from one part
> of the island to the other. Here are no towns or villages; most of the houses are
> built in the plantations, with no other order than what conveniency requires; they
> are neatly constructed, but do not exceed those in the other isles. The materials of 342
> which they are built, are the same; and some little variation in the disposition of the 175
> framing is all the difference in their construction. The floor is a little raised, and
> covered with thick strong mats; the same sort of matting serves to inclose them on [352]

[TEXT CONTINUED ON PAGE 7]

TABLE 1. POPULATION OF TONGA 1840-1921 BY PRINCIPAL ISLANDS AND ISLAND GROUPS

	1840	1900[a]	1902	1905	1906	1909	1911	1915	1917	1918	1919	1920	1921
Eua	200	423	453	427	402	428	363	426	412	398	386	384	387
Tongatabu	8,000	7,943	8,098	8,350	8,473	8,580	8,550	8,876	10,155	9,688	9,264	9,228	9,740
Haapai	4,000	5,243	5,236	5,466	5,460	5,640	5,803	5,823	5,980	6,160	5,894	6,108	5,976
Vavau	4,000	4,614	4,869	4,816	4,887	6,075	5,161	5,548	5,779	5,643	5,345	5,546	5,787
Niuatoputapu	1,000	716	755	771	767	728	705	761	810	832	732	734	761
Niuafoou	1,300	1,080	1,183	1,273	1,243	1,235	1,130	1,156	1,109	1,121	1,068	1,128	1,108
Total	18,500	20,019	20,694	21,103	21,232	21,695	21,712	22,590	24,245	23,842	22,689	23,128	23,759

[a] The statistics for 1900 and after include full-blooded Tongans only.

1: Gifford E-4,5 (1920-1921) 1929 OU9 Tonga OU9

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TABLE 2. TONGAN POPULATION FOR 1921 BY SEX AND AGE

	AGED PEOPLE		PEOPLE IN PRIME		YOUNG PEOPLE		CHILDREN		TOTAL POPULATION	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Eua	4	10	23	20	99	93	67	71	193	194
Tongatabu	337	469	737	784	2,005	1,626	1,998	1,784	5,077	4,663
Haapai	133	195	628	630	1,028	951	1,284	1,127	3,073	2,903
Vavau	131	168	427	518	1,173	1,075	1,210	1,085	2,941	2,846
Niuatoputapu	20	38	42	39	154	132	182	154	398	363
Niuafoou	97	91	121	124	145	116	213	201	576	532
Total	722	971	1,978	2,115	4,604	3,993	4,954	4,422	12,258	11,501

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1: Gifford E-4,5 (1920-1921) 1929 OU9 Tonga OU9

TABLE 3. PROPORTION OF FIGHTING MEN TO POPULATION

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	NUMBER	PERCENTAGE
Eua	122	32
Tongatabu	2742	28
Haapai	1656	28
Vavau	1600	28
Niuatoputapu	196	26
Niuafoou	266	24
All Tonga	6582	28

The only comparable material which I possess for other years is for Niuafoou Island, where in 1902 there were 334 able-bodied fighting males, who formed 28 per cent of the population.

IMMIGRATION

The Tongans have no tradition of a migration into their islands, of a 173
Havaiki homeland, or of an overrunning of their country by foreigners except 167
the coming of Ahoeitu, the first Tui Tonga of the dynasty which ended in
1865. Tradition refers to the country as already peopled, but pictures
Ahoeitu's entry as apparently peaceful. Though there is no mention of 167
armed invasion, there are many apparently authentic instances of peaceful
penetration by foreigners. From Fiji there were two large influxes of people, from Samoa one, and from Rotuma and Tokelau minor accretions.
This paper and other Tongan papers by me contain many references to
foreign accretions to the Tongan population. Most of the first holders 624
of the present matapule titles were foreigners. 449 565

From Niue, Uvea, and Futuna there seems to be no record of immigrants in heathen times, though Christian times have seen a considerable influx of Uveans (62, p. 245). Perhaps hostilities with Niue, which are mentioned in Niuean traditions, were responsible for the absence of immigrants therefrom (55, pp. 19-21). Perhaps hostilities with Futuna may likewise have interfered with immigration from that island, though we hear of the Tui Tonga (either Takalaua or Kauulufonua I) sending a governor to Futuna as well as to Rotuma and Samoa.

133 valed by considerable stretches of water. These groups, from north to south,
are Vavau, Haapai, and Tongatabu. Of the three, Tongatabu has the largest
land unit in an island which lends its name to the entire group. This island
was, culturally and politically, the center of Tongan life.

121 Archaeological investigation, extended to cover as much of each of the
172 three geographical divisions of the Tongan archipelago as available time and
184 the distribution of favorable sites warranted, failed to discover any important
128 differences between the archaic remains found in different islands. This
cultural uniformity renders it desirable to treat the whole of Tonga as a unit
in the present report, rather than to give separate archaeological surveys of
any sort of geographic subdivisions.

144 The inhabitants of Tonga are, predominantly, full-blooded Polynesians.
161 Probably never much exceeding twenty-five thousand in number, the Tongans
have approximately that population today.

128 An apology is perhaps due for presenting my subject in a form which
requires the reader to peruse the entire detailed outlay of evidence in order
to obtain a gist of the pertinent facts and the related conclusions. It seems
to me that most of the detail is essential to a general understanding of involved
problems, and that conclusions, even general remarks, are devoid of meaning
when separated from the detail of listed phenomena. I have, therefore,
included all the involved data in the running discussion, in order to give the
specifically interested student an intelligent, unabridged representation of the
field.

172 On first consideration, the archaeological outlook in Tonga is not promis-
114 ing. The student finds here a mottled field, poor in stratified deposits
attributable to human sources, but rich in artificial monuments of earth and
114 stone. The greater part of these have not been carefully examined by pre-
ceding investigators. Such as have been found mentioned in published
accounts have generally been treated as of unknown or doubtful origin.
173 Local mythology has taken full advantage of these wonders and has accounted
for their presence in many fanciful ways. There is, however, a much more
plausible group of traditions, practically free from dependence upon super-
human agencies, accounting for these structures in a not illogical manner.
173 These traditions, surprisingly consistent in their wide repetition and flatly
114 historical in style, have too frequently been overlooked altogether or pur-
posely disregarded by investigators.

According to the Tongan census of 1920 there were at that time 23,128
161, Tongans in the group. Census returns for the past twenty years show that as a
whole the Tongan population is increasing slowly. A temporary decrease was
shown in the reports for 1918 and 1919, but returns for 1920 show a slight
162 increase. It is of interest to notice also that there has been considerably less modern
mixture with other races than in many other Polynesian groups. The census
of 1917 records only 300 mixed bloods. How accurate this may be I do not know,
but since the same census records only 347 Europeans and 529 other Pacific
islanders, it is apparent that there have been fewer opportunities and temptations
to marry outside the race than there have been in many other places where the
aboriginal inhabitants are greatly outnumbered by the Europeans or Orientals.
These facts should be borne in mind.

14: Thomson G-3 (1886-1891) 1894
OU9 Tonga OU9

A SKETCH OF THE HISTORY OF TONGA.

I.

THE BORDERLAND OF MYTH.

SEEING that the past is the key to the present, I was at 121
some pains to learn the history of Tonga. This tiny [161]
kingdom of 20,000 people, inhabiting widely scattered [197]
islands, but speaking the same language, intermarrying, and obeying the same Government, boasted so complicated a social polity that its history, as an illustration of the growth of human institutions, is worthy of study for its own sake.

Until the introduction of Christianity swept away the 175
old beliefs and the institutions that depended on them, 643
there were in Tonga a spiritual and a temporal king. The former—the Tui Tonga—was lord of the soil, and enjoyed divine honours in virtue of his immortal origin; but he had an ever-diminishing share in the government, and he could take no part in any civil quarrel. His sole duty

[p. 291]

173 Uvea,[1] from Futuna,[2] and even from Haamoa[3] and the far
175 islands to the North.[4] No man knows whence he derived
643 his power, unless indeed he was a descendant of the gods
[648] themselves, of Tangaloa, of Ikuleo, and of Mau'i, but this
[651] is hidden in the clouds of the ages. The people of
[776] Tonga were so thick in the land that the commands of
[203] the king were carried from one end of the land to the
other, the people lying on their mats and shouting the
[203] message one to the other. It was the time of "*Fanogonogo*
Tokoto" (making proclamation when reclining).[5] And
173 seeing that all men were his slaves, and that the world
175 held none that did not do him homage, the Tui Tonga put
643 466 heavy burdens upon the people, and made them drag great
349 stones and set them up for a memorial of his greatness;
and the people neglected their yam plantations to do the
tasks set them by their king, so that there was a great
scarcity. And when they hungered they began to cry
out against their king, for men are ever hard to govern
when their bellies are empty.

173 Now there came a Tui Tonga, named Takalaua, who
175 was strong and harsh, and was greatly feared of the
643 people. Every day he sent out his fishermen from Mua
[224] into the bay, and they would land on the islands to
arrange their nets. One day they landed on Ata, near
Euaiki, and when they sailed the two old people who

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[1] Wallis Island.
[2] Hoorn Island.
[3] Samoa.
[4] Gilbert Islands.

[361] [5] At the time of Tasman's visit in 1643 there seem to have been no
villages. The land was highly cultivated and fenced, and each family
[311] lived in its own plantation. It is more probable that the *Fanogonogo*
Tokoto referred to this than that the population was ever much greater
[161] than at present.

14: Thomson G-3 (1886-1891) 1894
OU9 Tonga OU9

THINGS ANTHROPOLOGICAL AND ZOOLOGICAL.

It was the census year, and the law provided that the 659
Minister of Police should be responsible for numbering [625]
the people. His arrangements were somewhat primitive,
but I daresay that they produced more satisfactory results
than would the more elaborate machinery of our Registrar-General
if put into the hands of such workmen. Kubu
simply ordered his policemen to visit every village and
write down the names of the inhabitants. In a country
where every individual is personally known if not related
to the enumerator, not many omissions are likely to have
been made. The total census of the natives was 19,196. 161

The registers of the births and deaths for the previous [163]
ten years showed the population to be steadily decreasing,
not so much on account of excessive mortality as of a low
birth-rate. The death-rate (36 per mille), however, was high 161
when compared with European countries; and it would be 165
strange if it were not so, when it is remembered that the
arrival of Europeans has introduced the germs of many
diseases from which the natives were formerly free, and
to which they are therefore not yet inured. Chiefly de- 000

[f. 371]

164 Chiefly destructive among these are dysentery and whooping-cough, both of them unknown to the Tongans before the advent of European ships. But apart from bacilli of actual foreign diseases, there is now no doubt that the different races of men are themselves uncongenial, and that their first meeting generates a mysterious poison fatal to the weaker race. In the Pacific, Tahiti, Niue (Savage Island), and Penrhyn Island in particular were swept by a destructive epidemic immediately after the visit of the first European ship, though the visitors were not themselves suffering from any such ailment at the time. Such disasters have led the natives of some of the islands to adopt a murderous system of quarantine, and the loss of many lives has been the result. Tonga, however, seems to have been spared this penalty that attaches to the "blessings of civilisation," unless the tradition of an epidemic following Tasman's visit has been lost. The first sickness preserved by tradition is the *ngangau* (lit. headache), a new disease that ravaged the group about the year 1776, but which was not associated in the natives' minds with the visit of
[165] Captain Cook three years before. Of this many hundreds are said to have perished.

161 I do not believe that the population of Tonga ever greatly exceeded 20,000. It is true that the natives have
[361] traditions of a time when the king's orders could be shouted from house to house as the people lay on their mats; but I think that this refers to the time when each family lived in its own plantation instead of in villages,—a state of things that was observed by Tasman in 1643. Cook estimated the people present at the entertainment given to him at Maofanga in June 1777 at 10,000, the

present population of Tongatabu. Since that time the 161
population has been either stationary or decreasing—
slightly under normal circumstances, rapidly in time of
epidemic. In 1893 the measles and the diseases con- [164]
sequent upon it carried off one-twentieth of the people. [165]
In the absence of such severe visitations whooping-cough [164]
is the most destructive of the introduced diseases. The [757]
mothers lack the knowledge and the self-devotion re-
quired to successfully nurse their children through such ill-
nesses, and content themselves with calling in one native
quack after another to dose the unfortunate child with a
succession of nostrums until death puts an end to its
sufferings.

For the low birth-rate there are several reasons. In 163
ancient times the women were required to do no work 462
beyond the light occupations of fishing and cloth-beating.
The men planted the food, carried in the wood and
water, and did the cooking. The missionaries have so [797]
industriously cultivated the idea of family life that in [593]
most Tongan households the women, after marriage, do the [178]
same work as the wives of the peasantry in Europe. In
other respects they have greater liberty than under the
heathen system. Formerly a girl's hair was cropped short 885
at about twenty, and she was thenceforward classed as 302
an old woman (*fefine motua*). No woman of mature age 582
could then masquerade in the guise of a young girl, and
there was no inducement to defer marriage and the cares
of maternity; for the woman who aspired to be younger
than her years had no peace from the sneers of her con-
temporaries. This is all changed. Under the grim social 178
code of the missionaries, by a mockery of fate, a laxer 582

for less than a dollar. As soon as it transpired 692
that there was nothing in it to preclude one 693
Tongan from pleading for another, every native
who could talk better than he could work took
to loafing about the police courts, offering him-
self as a mouthpiece to the litigants. His [465]
fees were tentative at first—"give me what you
like if I get you off," and so on—but now he
likes to be paid in advance, though you can brief
him with a sucking-pig and keep him going
with an armful of yams as a "refresher." The
loya who enjoyed the largest practice were those
who had the code at their finger-ends, and had
acquired a high reputation for obscuring the issue
and confusing the common sense of the court.

The chief justice also gave me a summary 161
of the birth and death returns for the nine
years ending December, 1899. I do not regard [659]
them with any confidence, partly because I
know the haphazard way in which the registers
are kept, and partly because, assuming the total
population of the kingdom to be not less than
19,000,* the death-rate is represented as low as
eleven per thousand and the birth-rate as high

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* The Mission returns put the total population at 19,968: Tonga- [162]
tabu, 8,454; Haapai, 5,087; Vavau, 4,589; Niuatobutabu, 710;
Niuafoou, 1,128. The males exceed the females by 454, or 2·2 per
cent., and the adults outnumber the children.

161 as twenty-six per thousand, which is very un-
[659] likely, seeing that families of more than three
[731] living children are rare. Nevertheless, the
[164] Tongans are all agreed that, in spite of a devastating epidemic of measles in 1893, there has been an increase of population of over 200 in the nine years; the returns say 203. I think myself that the population is stationary, or slightly decreasing, but that there has been no very marked decline, as in Hawaii, New Zealand, and Fiji since the beginning of the nineteenth century. The people, moreover, are so fearful of foreign epidemics and so sensitive about quarantine that there is not much likelihood of a sudden decline for many years to come.

563 It was very pleasant to renew acquaintance with the European colony at the Consulate. Many of them are prosperous merchants and their appearance of rude health justified the saying that the climate of Tonga is the healthiest in the Pacific. The little gathering did not pass off without incident. While I was talking to two new arrivals an elderly and rather feeble little gentleman in black entered the room, and my two visitors hastily seized their hats and took their leave before I had had time to exchange a word with them. The features of my

EURO-AMERICAN ACCULTURATION IN TONGA.

By Edward Winslow Gifford.
University of California.

THE Polynesian Kingdom of Tonga, a British protector- 131
ate, lies about a thousand miles north of New Zea-
land, four hundred south of Samoa, and two hundred east
of Fiji. The population of Tonga in April, 1921, was 24,935, 161
of which 23,759 were Tongans, 235 were other Pacific
Islanders, 706 were other foreigners (chiefly Europeans),
and 235 were half castes. The Tongan population of to-day
is probably nearly as numerous as it was in Captain Cook's
day.

There is no European colonization in progress. for 167
foreigners are prohibited from acquiring land except by 423
lease. The Tongans are Christians. The most important 795
church is the Free Church of Tonga, an offshoot of the
Wesleyan-Methodist Church.* Two-thirds of the population
belong to it. Next in numerical importance are the Wes-
leyan-Methodists and the Roman Catholics, each holding
about a sixth of the population. Then follow the Mormons,
the Seventh Day Adventists, and the Episcopalians. Reli-
gious rivalry is keen.

With unimpaired population, with no Caucasian con- 177
queror in the land, and with its instiutions functioning 171
almost entirely through Tongans (except for friendly
British financial direction), the kingdom of Tonga offers
something of a parallel in Euro-American acculturation to
the empire of Japan.

It is the aim of the writer to present a number of 121
examples, to make clear the manner in which acculturation
is proceeding.

Tonga is now a constitutional monarchy with a legis- 643
lative assembly composed of ministers, nobles, and elected [642]
representatives of the people. The present monarch is Queen

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* A majority of the Free Church and the Wesleyan-Methodists have this year, 1924, re-united.—Ed.

[p. 281]

21: Simkin U-5 (no date) 1945 OU9 Tonga OU9

134

without spelling, probably owing to deficiencies of potash. There are 135
no minerals in Tonga, and no forest resources of value. 137

The islands in the volcanic chain are of little account. Only Niua 133
Fo'ou, Niuatobutabu, and Tafahi are large or safe enough to be [311]
peopled, and they contain less than a tenth of the population. Two of them, however, have attracted some fame, Niua Fo'ou because of its Tin-Can Mail, and Falcon Island because of its periodic disappearances. This jack-in-a-box island is associated with an active volcano, whose eruptions occasionally leave a raised surface of ash and scoria which sea and rain later wash away.

The eastern chain is divided into three groups, Tonga Tapu in the 131
south, Ha'apai in the centre, and Vavau in the north. Tonga Tapu 162
contains about half the Kingdom's habitable area, and half its people 311
(16,234). Ha'apai has nearly the same population as Vavau, but less than half its habitable area.[2] Each group has a serviceable port, Nukualofa in Tonga Tapu being the most important and also the capital. 504

Climatically[3] the Kingdom is well favoured, since it lies in the zone 132
of the southeast trades, and has no orographical obstructions to cause rain and high humidities. The tropical Niuas have much the same rainfall and temperature as Apia and Suva, but the other groups have

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[2] The following statistics illustrate the size, distribution, and density of the population (1939 Census) 161 162

Group	Population	Tongans	Habitable Area	Persons per sq. mile	Percentage of Tongans
			sq. miles		
Tonga Tapu	16,234	15,324	134.8	120	47
Ha'apai .	7,483	7,383	24.3	308	22
Vavau . .	8,199	7,957	56.1	143	24
Niuas . .	2,214	2,198	20.6	108	7
TOTAL . .	34,130	32,862	235.8	145	100

[3] The following climatological statistics (supplied by the Director of Meteorological Services, Air Department, New Zealand) illustrate in outline Tonga's principal climatic characteristics: 132

	Nukualofa	Vavau
Annual mean sea-level pressure (mbs)	1014	1013
Annual mean air temperature (°F)	74	78
Annual mean daily maximum temperature (°F)	80	82
Annual mean daily minimum temperature (°F)	68	72
Average annual rainfall (ins.)	63.45	77.57
Percentage of winds between south and east	72	68
Average wind force in morning (m.p.h.)	8	6
Average wind force in afternoon (m.p.h.)	10	7
Annual average relative humidity (a.m.)	79%	77%
Annual average relative humidity (p.m.)	73%	—
Annual mean of sea temperature (°F)	77	79

21: Simkin U-5 (no date) 1945 OU9 Tonga OU9

439 shipping difficulties. These setbacks are probably only temporary, and
000 Tonga can look forward to developing a modest, but useful, trade in
both peanuts and tapa after the War.

Apart from them the only likely addition to the export trade is
439 fruit. Before the Great War Tonga had a profitable fruit trade with
New Zealand, but in 1941, an exceptionally good year, it amounted
[434] to less than £2,000 worth of pineapples and melons. Tonga produces
excellent qualities of these fruits; the only problems are transport
and markets. New Zealand could well afford to extend a little generosity
to Tonga in regard to markets, especially as New Zealand
exports about five times as much to Tonga as it imports.

652 During the present century Tonga has built up considerable overseas
investments out of its trade surpluses. Since Tonga has no foreign
debts its investments place it in the select coterie of creditor nations,
with foreign assets equivalent to four years' normal revenue. This
exceptionally liquid position is necessary to a large extent since the
country's money income depends so largely upon the vagaries of the
copra market. There is, nevertheless, a definite anomaly in this small
and economically backward nation lending nearly all its savings to
000 wealthy countries like Australia and New Zealand. It is impossible,
in view of the Director of Agriculture's very specific proposals for
economic development, to believe that there are no avenues for sound
investments in Tonga, especially as some of the developments suggested
would lessen the need for large overseas funds by reducing the country's
dependence on imports.

HEALTH

164 The standard of health is rightly considered a major test in judging
the efficiency of a native administration. That the Tongans are basically
healthy can be seen from their fine muscular physiques, and confirmed
by their moderate death rate and their satisfactory rate of natural
163 increase. During the five years 1934-38 their birth rate averaged 3.82
165 per cent, their death rate 1.41 per cent, and their rate of natural increase
161 2.41 per cent. These figures compare very favourably with those for
Fiji, American Samoa, and for the New Zealand Maori. There are
165 no figures available for expectation of life but the Tongans are decidedly
not short-lived. There are plenty of old people, including a few
centenarians, while senility is listed as causing about one-eighth of the
[164] total deaths. Tuberculosis, which accounts for about a fifth, is the

174 language would, in the first instance, move eastward, along the chain of islands, lying between the 10° and 15° of south latitude, over 50° of longitude, and, eventually, to distant localities more difficult of access."*

Considering the geographical position of Tonga-
[173] tabu and its contiguous dependencies; the un-
[161] doubted natural superiority of the inhabitants over
those of surrounding groups; the prestige which
[203] the Tonguese name carries with it wherever it is
known in the Pacific; and, finally, the fact that
their traditions speak of a time when the population on the main island was so dense, that a sort of
telegraphic mouth-to-mouth communication carried
tidings between the most distant points in an incredibly short time, we might almost be inclined to
sustain Mr. Crawfurd's opinion that in these islands
the primitive germ of the Polynesian race was
located. Nothing, however, can be advanced with
certainty. That the population of these islands
[161] was at one time much greater than it is now, we
[114] have no doubt; but we think that there are no
evidences to show that it was so great as the tradition intimates. Some also of the Tonguese songs and traditions indicate that Samoa has been the source from whence several of the chieftain families have sprung, and from whence also the names of several of the most important localities in Tonga have been derived. This, however, should not be allowed to prove too much. I am, indeed, inclined to think that Samoa is much more likely to have been peopled from Tonga, and that its subsequent

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[113] * Preliminary Dissertation to "A Grammar and Dictionary of the Malay Language," by John Crawfurd, F.R.S., London, 1852, p. 253.

32: Staveley & Douglas D-4 (no date) 1959
OU9 Tonga OU9

BLOOD GROUPS IN TONGANS, (POLYNESIA)[1]

By J. M. STAVELEY and R. DOUGLAS

125 RESULTS OF TESTING 200 Tongans for various blood groups and abnormal
haemoglobins are the subject of this report. A blood group study of
this population has been reported by Kooptzoff and Walsh.[2] These
workers tested 102 subjects for the A_1A_2BO, MNS and Rh systems. We
have extended the blood group systems tested to include P, Lewis, Kell,
Duffy, Kidd, Diego, Wright, Vel, Sutter and the serum Gm groups.
Saliva was also examined for secretion of ABH and Le^a substances, and
a search was made for abnormal haemoglobins.

GEOGRAPHICAL FEATURES[3]

101 The kingdom of Tonga consists of about 200 islands in three major
groups, Tongatapu in the south, Vava'u in the north, and the Ha'apai
133 group lying between these. The islands of Vava'u are generally high and
mountainous, those of Ha'apai and Tongatapu low-lying and of coral
131 formation. The kingdom lies between 15° and 23° south and 173° and
177° west, and is free from malaria.

[361] Nuku'alofa, the capital, is on the main island of the southern group,
Tongatapu, and lies 1,100 miles north-east of Auckland. The population
161 of the kingdom in 1959[4] is given as 58,351, of which 56,669 are Tongans,
162 and 1,682 part Tongans, Europeans and others.

173 According to tradition, the inhabitants of Tonga came from Samoa
somewhere about 950 A.D.

COLLECTION OF SPECIMENS

125 With the approval of the Government of Tonga, Dr. Sione Tapa,
126 Chief Medical Officer, generously undertook the selection of the subjects
and the collection of the specimens. In this work, Dr. Sateki Tupou,
Assistant Medical Officer, played a big part. From each selected person,
a clotted blood specimen and blood in Alsever's solution with added antibiotics was obtained by venepuncture. The saliva specimen was obtained
after the mouth had been rinsed with water, and was heated in a boiling
water bath for ten minutes.

[101] The samples from the 200 people concerned in the study were
collected in batches of 50; one batch in May 1959, two during July 1959,
and one in September 1959. This allowed the collection to take place
just prior to the departure of a ship for New Zealand. It also allowed
the testing of each batch to be completed during the week after arrival

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[122] [1] This work was carried out under a grant from the Auckland Medical Research Foundation.

[2] Kooptzoff & Walsh, 1957.

[3] Pacific Islands Year Book, 1956:109.

[4] Pacific Islands Year Book, 1959:111.

39: Gerstle & Raitt C,Q-4,5 (1952-1972) 1974 OU9 Tonga OU9

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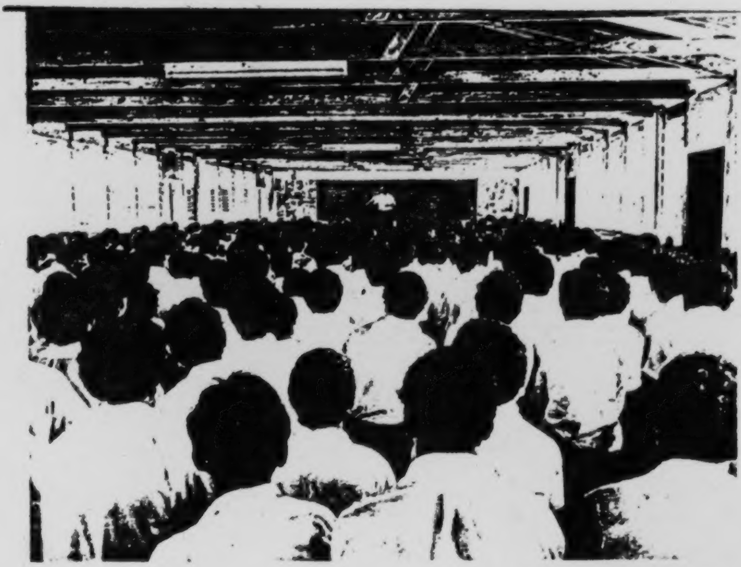

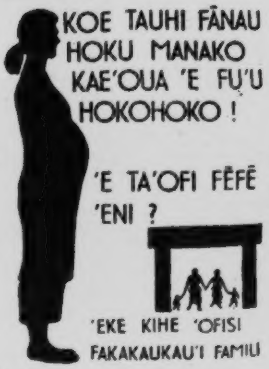

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Population is becoming a major problem. There are approximately 92,000 people in Tonga; however, distribution is very uneven, for more than half are now living on the rapidly urbanizing island of Tongatapu—many having moved from outer islands in search of better employment or educational opportunities. Photo above is at St. Andrew's (Anglican) School in Nuku'alofa. At right is a family planning poster which, in essence, reads: *"I love children, but not one after another!" What can you do? Inquire at the Family Planning Office.*

Kuo kamata ke fu'u tokolahi 'a Tonga. 'Oku fe'unga mo e toko 92,000 he taimi ni, pea 'oku laka hake 'i he vahe ua 'a e kakai 'oku nofo 'i Tongatapu. Lahi foki e hiki ki ai mei he ngaahi 'otu motu kehe koe'uhi ko e kumi ngaue pe ko e fie ma'u ha ako lelei ange. Ko e 'Apiako 'Ingilani (St. Andrews) e 'oku ha 'i olunga, pea ko e akonaki e ki he fakakaukau'i famili 'i to'omata'u.

42: Walsh K-4,5 (no date) 1970 OU9 Tonga OU9

POPULATION CHANGES IN TONGA:

AN HISTORICAL OVERVIEW AND MODERN COMMENTARY

A. C. WALSH

IN common with other Pacific peoples, many 161
Tongans are now finding that the attractions of the main island and capital town far outweigh the often declining attractions of the islands of their birth. Population pressure, limited or unevenly developed resources, and new demands for money have induced many Tongans to resettle where the prospects seem more tolerable. As a consequence, the demographic importance of the different islands and settlements relative to one another is changing. This much is widely known, but it is sometimes seen as a phenomenon peculiar to recent years, although evidence is available to indicate that population movement is no new thing in the Pacific.

Tongans have long been amongst the most 173
mobile of the peoples of the central Pacific. At 648
varying times in the prehistory of the area, the Tongan *tu'i tonga*[1] claimed suzerainty over and tribute from Futuna and Wallis, the Lau group, Rotuma, and parts of the main islands of Samoa and Fiji. In the contact period over 3,000 Tongans 175
were engaged in the Fijian wars from which 648
Cakobau emerged victorious, while later others were engaged in missionary endeavours as far away as the Solomons. This early mobility, both 505
beyond but more especially within the group, was 133
no doubt encouraged by Tonga's physical geography.[2] Its high, long western chain of volcanic

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[1] The oldest and most important of three lines of kings, a sacred kingship dating from at least the tenth century.

505 islands, from 'Ata in the south to Niuafo'ou some 500 miles to the
133 north, served as navigation "beacons" which lit up and signposted the
vast ocean highway, making deliberate contact between parts of the
175 group a not uncommon happening from very early times. This, in turn,
[181] encouraged cultural homogeneity and the emergence of a central
[642] political authority in the eastern more densely settled, low coral islands
running parallel to the volcanic chain. A high degree of social strati-
[565] fication and strong dynastic rule uniting the islands can be traced
[642] back to the tenth century, and this continued without interruption for
[642] several centuries. Although the main groups of islands, Vava'u, Ha'apai
and Tongatapu, had in practice become separate political entities by the
time of European discovery, this is unlikely to have diminished the
[669] contact among them. In the disturbances which followed discovery the
[165] whole group was plunged into sporadic civil war (1799-1826) in which
it is estimated that a quarter of the population died, and peace and unity
175 were not really restored until 1852. Warfare, introduced diseases, and
161 new political and missionary activities had effects on population numbers, distribution and settlement patterns no whit less dramatic than the pressure of the present day. The pace, direction and character of population movement may have changed, but movement and change are in themselves not new phenomena in Tonga.

DISPERSED AND NUCLEATED SETTLEMENTS

361 Today's typical settlement consists of an assortment of houses set on two-fifths of an acre allotments (*'api kolo*) sited close to the sea on the sheltered side, and some distance inland on the weather side, of an island. The settlement is nucleated, its boundaries marked by a graveyard, sometimes by an *ā kolo* or village fence, and always by a clear transition in land use: the residential village gives way to cultivated *'api tukuhau* or tax allotments, usually of 8¼ acres to which all male taxpayers over 16 years are theoretically entitled. Apart from the towns of Neiafu in Vava'u, Pangai-Hihifo in Ha'apai and Nuku'alofa and nearby industrial Havelu Loto in Tongatapu, there are few differences, except in size, in form or function among villages anywhere in the group. Some, with population growth, have expanded and joined to form one continuous settlement, but even then the component parts have retained their separate identity and, with this, the characteristics of the small village.

175 This pattern is of relatively recent origin, for the first European
361 explorers to visit Tonga recorded no villages as such. Tasman, who
first discovered the islands in 1643, observed that "every man lived in his own gardens, the allotments being separated by reed fences."[3] Cook,

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[3] Cited by Kennedy (1958): 162.

42: Walsh K-4,5 (no date) 1970 OU9 Tonga OU9

161 McArthur has recalled in some detail evidence of loss of life during
this period.[13]

161 Such contemporary observations as were made were not always
731 supported by other evidence, but it can be assumed that the ravages
165 of war and disease affected the various islands unevenly and at different
163 times, epidemics probably having fewer widespread effects than in the
582 larger islands of the Pacific; there was a high mortality rate, especially
797 of infants; and, with few in the reproductive age groups, a sex imbalance, and later marriages (induced partly because of the "grim social code of the missionaries"), the population declined considerably.

I

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Distribution of Population by Island Groups (percentages)

	Pre-contact[1]	1840[2]	1891[3]	1921[4]	1939[5]	1956[6]	1966[7]
Tongatapu	43.9	43.2	—	—	—	55.0	61.9
'Eua	2.0	0.8	—	—	—	3.4	4.4
Tongatapu and 'Eua	45.9	44.0	36.6	42.6	46.2	58.4	66.3
Ha'apai	21.9	21.6	28.2	25.2	21.9	17.5	13.7
Vava'u	21.9	21.6	26.5	24.4	24.0	22.0	17.5
Other[8]	10.4	12.4	8.7	7.8	7.9	2.2	2.6
Total population	29,700	18,500	19,968	24,935	34,130	56,838	77,429

[1] Estimated by Maude (1965): 27.
[2] Wilkes, cited by Maude: ibid.
[3] Missionary account. Census 1956: 17.
[4] Wood (1952) Appendix 6.
[5] Census 1956: 41.
[6] Ibid.
[7] Census 1966: 36.
[8] Niuafo'ou and Niuatoputapu. Niuafo'ou had no population in 1956.

161 3. *1852–* : "A phase of adjustment and recovery" dating from
1852 when the civil war ended, but probably having little effect on
[731] growth until the 1890s. From this date the population grew "slowly
but irregularly" from some 20,000 in 1891 to about 24,000 in 1918,
[165] with occasional epidemics still taking a large toll of life. The increased
[751] growth rate in recent years, due largely to improved health measures
[731] and the absence of epidemics, has produced a population at least
double the most generous estimates given for the pre-contact period.
Thus between 1891 and 1931, the annual rate of increase was 1.1
percent; between 1931 and 1956, 3.1 percent, and between 1956 and
[166] 1966, 3.6 percent. This increase, together with the marked movement
of population to Tongatapu referred to below, suggests that Tonga has
now entered a phase of dynamic growth. Tupouniua's phase of "adjustment and recovery" can be said to have ended in the 1940s.[14]

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[13] McArthur (1956): 202-206; and (1967): 68-75.

[164] [14] —— (1967): 96. An epidemic of measles in 1893 is reported to have killed
[165] a twentieth of the population, and an influenza epidemic in 1918 a tenth of the population of some islands.

The distribution of population within the group has changed con- 161
siderably from pre-contact days, with population movement being more 162
responsible for this rather than inter-island differences in birth or [166]
mortality rates. During the nineteenth century, the relative importance
of Tongatapu declined compared with pre-contact times; it regained
its former importance only in the 1940s, since which time it has
accounted for over half the total population. Together, Ha'apai and
Vava'u retained their former importance until well into this century,
the former until the 1940s, the latter until the 1960s. Population loss
has been greatest from Ha'apai, and Vava'u has exceeded it in popula-
tion since the 1920s. Undoubtedly there were movements of people [166]
within each island group, but we have no record of these from which
to make an estimate until the 1931 census, about which McArthur has
considerable reservations, especially with regards to Vava'u.[15] For this
reason only broad changes can be discussed.

Compared with the overall annual rate of population increase from 161
1931 to 1956 (3.1 percent), Tongatapu increased at the rate of 6.1, 162
'Eua, due to Niuafo'ou resettlement, at 18.1, Ha'apai 2.2, Vava'u 2.5 166
and Niuatoputapu 2.4. Clearly, there was a considerable movement to
Tongatapu, the greatest increases occurring in and around Nuku'alofa,
in the centre, the east and the south-centre. Ha'apai was the greatest
area of out-movement, with only Ha'ano, Pangai-Hihifo and the two
small islands of Mango and Fonoifua having increases in excess of the
national average. Vava'u was also an area of out-movement, but this was
not as marked as for Ha'apai. Within the Vava'u group, the growth
rate in many of the offshore islands was low and one lost population.
Most villages in 'Uta Vava'u approximated the national increase, and
there was a significant increase in the higher northern and western parts
of 'Uta Vava'u. Neiafu's slow growth (2.1 percent) can probably be [871]
accounted for by its commercial decline since World War II, and the
number of school children seeking education in Tongatapu. (41 percent
of all Vava'u migrants in Nuku'alofa in 1956 were from Neiafu.)

Population Changes, 1956–66

Between 1956 and 1966 Tonga's population grew by 3.6 percent per 161
annum; its composition became even more youthful (median age: 16.6 162
to 15.9); more male dominant (with the sex ratio changing from
103.5 to 105.9, for Tongans only, and an excess of males in all age
groups under 60); and more Tongan (97.04 percent to 98.5 percent).

The population of all island groups increased, but with the accel- [166]
erated movement of population, the rates of growth differed widely:
from 'Eua 7.6 and Tongatapu 5.3 to Niuatoputapu 1.1, Vava'u 0.8, and
Ha'apai 0.6 percent per annum.[16] The overall population density for

[15] McArthur (1956): 210, 214; (1967): 84. Maude (1965): 68-71, and Walsh (1964): 225-228 show details of population changes by village, 1931-56.

[TEXT CONTINUED ON PAGE 35]

42: Walsh K-4,5 (no date) 1970 OU9 Tonga OU9

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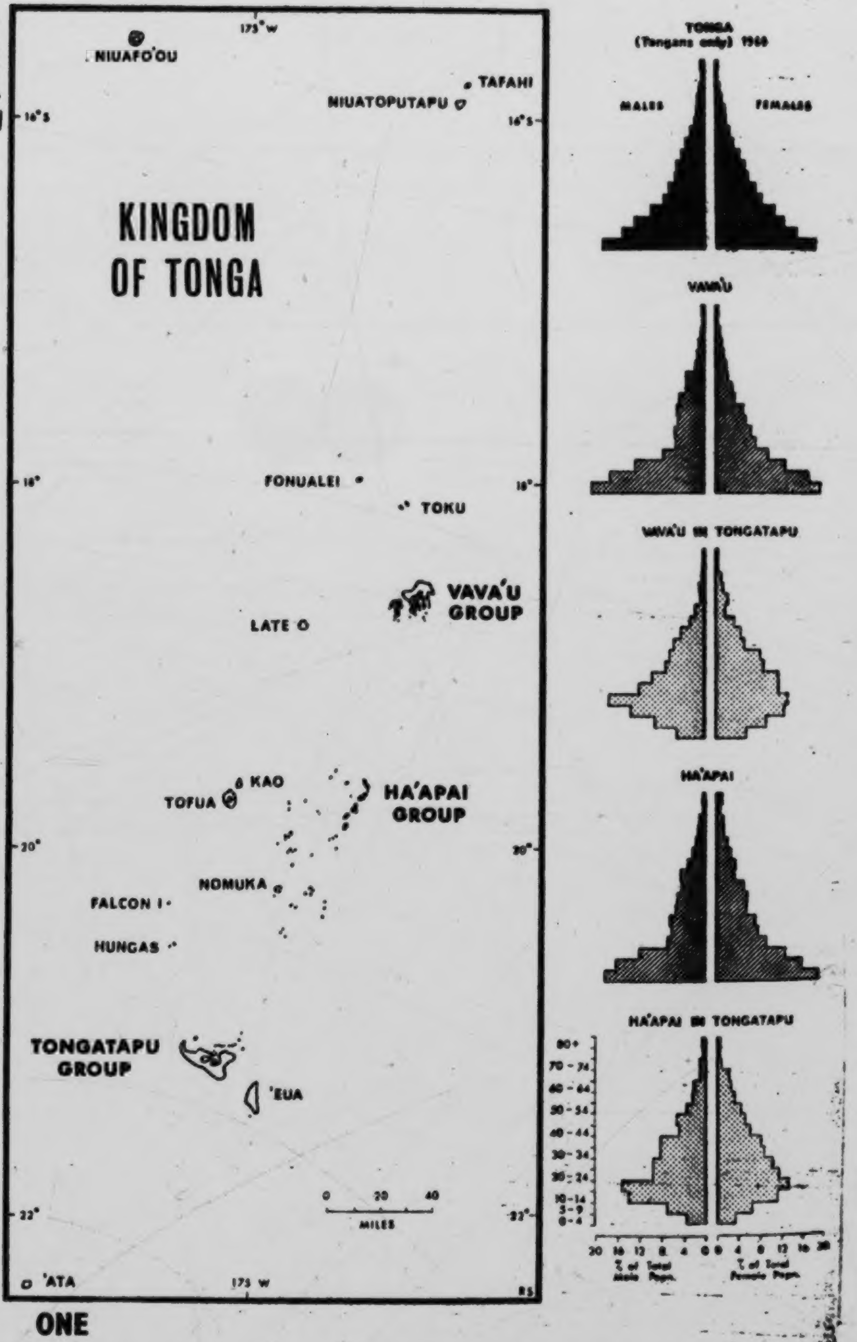
175° W
NIUAFO'OU
TAFAHI
NIUATOPUTAPU
16° S
16° S
KINGDOM OF TONGA
FONUALEI
18°
18°
TOKU
VAVA'U GROUP
LATE
KAO
TOFUA
HA'APAI GROUP
20°
20°
NOMUKA
FALCON I
HUNGAS
TONGATAPU GROUP
'EUA
0
20
40
MILES
22°
22°
'ATA
175 W
TONGA (Tongans only) 1966
MALES
FEMALES
VAVA'U
VAVA'U IN TONGATAPU
HA'APAI
HA'APAI IN TONGATAPU
80+
70-74
60-64
50-54
40-44
30-34
20-24
10-14
5-9
0-4
20 16 12 8 4 0
0 4 8 12 16 20
% of Total Male Popn.
% of Total Female Popn.

ONE

42: Walsh K-4,5 (no date) 1970 OU9 Tonga OU9

2

Enumeration Districts and Percentages Born In and Outside Districts (Tongans only) 161 162

Based on figures derived from the 1956 and 1966 censuses.

Enumeration District		% born in district	% born outside district
Tongatapu	1956	78.6	21.4
	1966	78.2	21.8
Ha'apai	1956	84.9	15.1
	1966	86.3	13.7
Vava'u	1956	81.6	18.4
	1966	87.1	12.9
'Eua	1956	48.1	51.9
	1966	46.8	53.2

each group for 1966 is shown below, with 1956 figures in parentheses: Tongatapu 480 (313); Ha'apai 523 (498); Vava'u 304 (279); Niuatoputapu 191 (172); and 'Eua 100 (57). Niuafo'ou, resettled during this period, had a population of 599 in 1966, and Tofua also now had a permanent population of 123. Settlements expanded, and 161
with no new ones founded, *average* village sizes increased in the three 162
main groups. Tofua and the three main towns excepted, Tongatapu 361
villages now averaged 529 (362), Ha'apai villages 346 (309), and Vava'u villages 283 (275). Outside Tongatapu, Leimatu'a in Vava'u remained the only village with over a thousand people; but in Tongatapu the number of such villages nearly doubled, from four to nine.

Table 2 shows the changed percentage of populations living in the 161
islands of their birth in 1956 and 1966, and Table 3 shows where 162

3 166

Birthplaces and Enumeration Districts (Tongans only)

Based on figures derived from the 1956 and 1966 censuses.

		District of Enumeration (percentages)			
		Tongatapu	Ha'apai	Vava'u	Eua
Tongatapu	1956	90.0	3.8	4.7	1.1
	1966	92.9	2.2	2.3	2.0
Ha'apai	1956	24.1	69.5	5.5	0.7
	1966	32.3	62.0	3.9	1.4
Vava'u	1956	16.5	2.6	80.1	0.4
	1966	24.9	2.9	70.2	1.3
'Eua	1956	18.0	2.1	1.4	78.4
	1966	20.0	1.7	1.3	75.3

people born in the main groups were living in these years. The less important islands of Niuatoputapu and Niuafo'ou are not shown. These tables suggest marked differences in the stability of population, ranging from Tongatapu, where 93 percent of the population born there were still residents in 1966, to Ha'apai, where the figure was 62 percent;

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[16] Figure 2 shows the changing growth rates by islands in the Ha'apai and Vava'u groups, and figure 3 shows similar changes by village in Tongatapu.

161 and a sharp deterioration in stability between 1956 and 1966, especially
162 with regards to Vava'u and the overall pace of migration to Tongatapu.
166 Table 3 also helps to place the respective migrations to Tongatapu and 'Eua in better perspective. Although migrants from all islands had increased in both islands, the *various* attractions of Tongatapu were clearly more important than 'Eua's one attraction—land, even, apparently, for those born in 'Eua of which a fifth were resident in Tongatapu in 1966. The table also shows a drop in the percentage of Tongatapu-born residing in Ha'apai and Vava'u. Most people born in Tongatapu and residing in these islands are government and church officials, women married to local men or children born in Tongatapu of Ha'apai and Vava'u parents. The percentage loss is likely to involve these last two groups. With one foot, so to speak, already in Tongatapu some decided to remain or return there.

A comparison of the population structures of Ha'apai, Vava'u with the migrant populations from these islands residing in Tongatapu in 1966 is provided by Figure 1. Both Vava'u and Ha'apai were under-represented in the secondary school and working age groups; both were over-represented in the very young and older age groups; and both had a lower proportion of males than the Tongan average (sex ratio Ha'apai 98.5; Vava'u 102.5). Conversely, the migrant populations from these groups living in Tongatapu in 1966 had a marked excess of males (Sex ratio Ha'apai 107.5; Vava'u 115.6) and a heavy weighting in the secondary school and working age groups. Between 1956 and 1966, the number of Vava'u-born in Tongatapu increased by 104 percent and the number of Ha'apai-born by 65 percent, and the proportion of these migrant populations in the school age group had decreased, from 33 to 28 percent for Vava'u and 28 to 27 percent for Ha'apai.

The areas most affected by out-movement, therefore, continued to be the many islands of Ha'apai and, more significantly, Vava'u. In Ha'apai four villages lost population, while all others increased at rates less than the national average. In Vava'u a further five off-shore islands lost population, the growth noted earlier in north and west 'Uta Vava'u was not sustained, a third of the villages in Vava'u lost population, and only two increased at a rate equal to the national average.

The areas of Tonga most affected by in-movement were Niuafo'ou; 'Eua, where land availability and its proximity to the markets of Tongatapu now counterbalanced some of its earlier limitations; and Tongatapu itself. The three areas in Tongatapu still most affected were: the eastern district with the lowest population density; the east-central district close to residential secondary schools, where certain nobles have made land available and where there is a tradition of in-movement from Ha'apai; and Nuku'alofa and its environs.

[361] This last mentioned movement, to Nuku'alofa has special significance, for it introduces a new element, urbanisation, into the history of Tongan

[TEXT CONTINUED ON PAGE 38]

42: Walsh K-4,5 (no date) 1970 OU9 Tonga OU9

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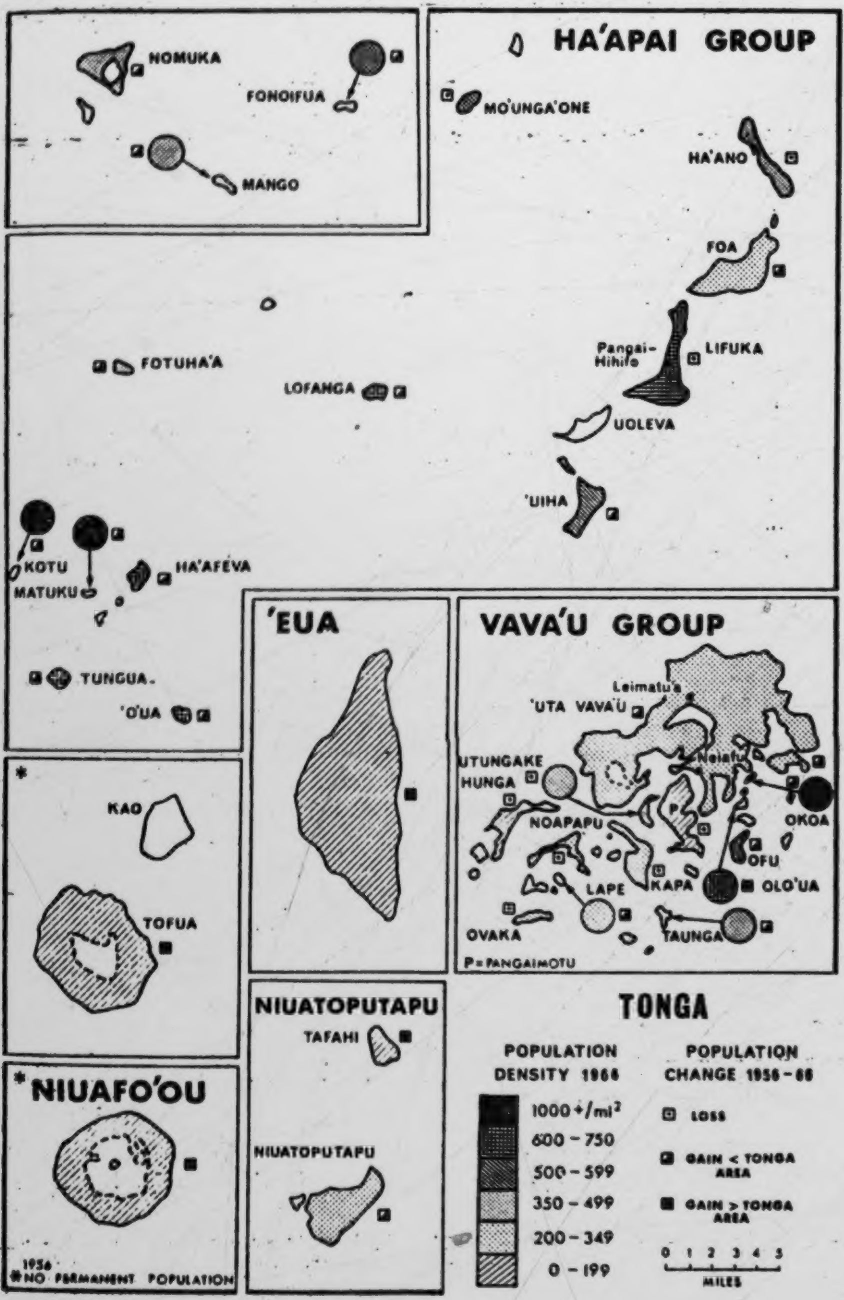
HOMUKA
FONOIFUA
MANGO
HA'APAI GROUP
MO'UNGA'ONE
HA'ANO
FOA
Pangai-Hihifo
LIFUKA
UOLEVA
'UIHA
FOTUHA'A
LOFANGA
KOTU
MATUKU
HA'AFEVA
TUNGUA
'O'UA
'EUA
VAVA'U GROUP
Leimatu'a
'UTA VAVA'U
UTUNGAKE
HUNGA
Neiafu
NOAPAPU
P
OKOA
OFU
LAPE
KAPA
OLO'UA
OVAKA
TAUNGA
P = PANGAIMOTU
*
KAO
TOFUA
* NIUAFO'OU
1956
* NO PERMANENT POPULATION
NIUATOPUTAPU
TAFAHI
NIUATOPUTAPU
TONGA
POPULATION DENSITY 1966
1000+/mi²
600 - 750
500 - 599
350 - 499
200 - 349
0 - 199
POPULATION CHANGE 1956 - 66
LOSS
GAIN < TONGA AREA
GAIN > TONGA AREA
0 1 2 3 4 5
MILES

TWO

161 population movement and the rapidity and extent of its growth since
162 1956 are likely to have important consequences which will bear
166 heavily on traditional political, social and economic customs and
361 practices throughout the kingdom. Until the mid-1950s, population
movement was more especially to rural Tongatapu rather than to Nuku'alofa. Thus during this period (1931-56) Nuku'alofa's annual growth rate (5.2 percent) was less than that of rural Tongatapu (6.3 percent), but since then the growth rate of Nuku'alofa (7.4 percent) has exceeded that of rural Tongatapu (5.3 percent). The most urban part of the town, Kolofo'ou, grew at an even faster rate (8.6 percent) while nearby Havelu Loto, the centre of the only sizeable industry on the island,[17] grew at the fantastic annual rate of 35.7 percent between 1956 and 1966. Where village growth exceeded or nearly approximated that of Nuku'alofa, it was either in very small villages, where an influx of a handful of settlers would give apparently spectacular increases, or in settlements to the centre and east of the island for reasons noted above. In 1956 Nuku'alofa contained 29 percent of Tongatapu's population and 16 percent of that of the kingdom; in 1966 these percentages had risen to 33 and 20 respectively.[18] This demonstrates both the increasing importance of Nuku'alofa in terms of total population and the marked tendency for population movement to Tongatapu to be urban-orientated.

Factors *pushing* people out of the outer islands and *pulling* them
554 towards Tongatapu and Nuku'alofa are: the greater opportunities for
511 social mobility in recent years: the changing economic needs of the
505 average Tongan; easier transport between islands; and, more recently,
207 the advertising (over the Tongan radio) of the attractions of Nuku'alofa;
447 overpopulation; land tied up in title disputes and in other ways kept
423 back from distribution; the low price for copra; two hurricanes in the
435 northern islands in 1961 and 1963; and the decimation of the banana
132 by black leaf streak and other diseases in Vava'u. If one single cause
245 can sum up these various and interrelated factors, it is the need for
money.[19]

It is not possible to know which islands and villages have recently
contributed most to Nuku'alofa's growth, for the 1966 census contained
127 no special statistics on towns. The following remarks, therefore, are
101 based mainly on information extracted from the 1956 census sorting

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655 [17] Quasi-government industries producing coconut by-products and furniture.

[18] Of the other two towns, Neiafu contained 23 percent of the Vava'u population in 1956 and 26 percent in 1966; the respective figures for Pangai-Hihifo were 28 and 25 percent. Neiafu grew at an annual rate of 2.5 percent; Pangai-Hihifo lost population (—0.5 percent p.a.)

[19] Walsh (1964): 179-197 discusses migrants' reasons for moving to Nuku'alofa. Some implications of these factors are discussed below. See 'Mobility and Economic Development.'

42: Walsh K-4,5 (no date) 1970 OU9 Tonga OU9

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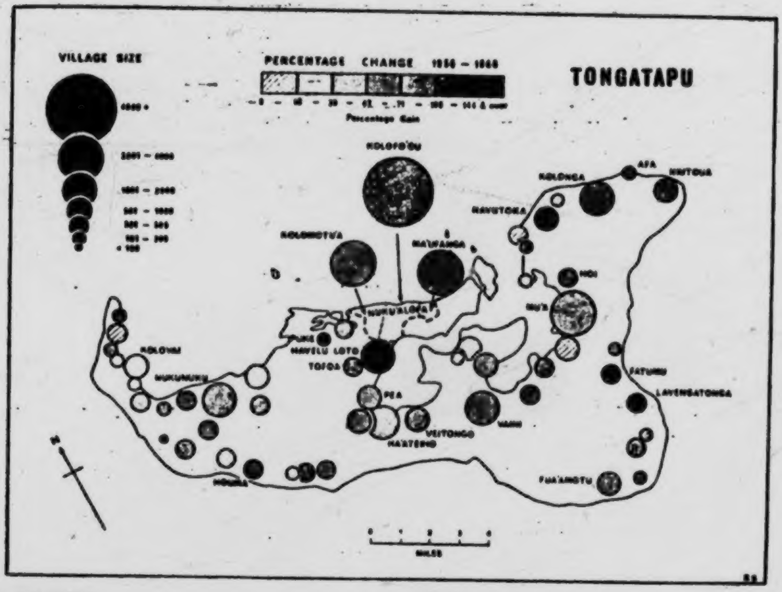
[102]


VILLAGE SIZE
PERCENTAGE CHANGE 1956 – 1966
Percentage Gain
TONGATAPU
KOLOFO'OU
KOLOMOTU'A
MA'UFANGA
NUKU'ALOFA
KOLONGA
AFA
NIUTOUA
NAVUTOKA
HOI
MU'A
FATUMU
LAVENGATONGA
FUA'AMOTU
VAINI
VEITONGO
HA'ATEIHO
PEA
TOFOA
HAVELU LOTO
KOLOVAI
NUKUNUKU
HOUMA
N
MILES

THREE

cards and from fieldwork undertaken in 1963-4. They relate to movement from other parts of Tongatapu, and from the northern island groups of Ha'apai and Vava'u which together accounted for almost all the town's migrant population at that date.[20] [127] [101]

Urban Movement—1956

Movement to Nuku'alofa from other parts of Tongatapu was more significant in terms of numbers than movement from the other islands, but it mainly involved young people, especially college girls, and women, many of whom had married into local families. For this reason it is thought to have fewer social and economic implications than migration from outside Tongatapu. There did, however, seem to be a more normal migratory pattern from the more densely populated west of the island. This area was, and still is, the slowest growing, and the proportion of migrants in the school age group was less than elsewhere. The area also has long-standing cultural ties with Nuku'alofa through mutual association with the *tu'i kanokupolu* title which appears likely to have influenced migration in the past and initiated a pattern of chain migration which still continues today.

[20] Much of the following section is based on Walsh (1969a).

161 162 166 361 Another significant area within Tongatapu from which migration to Nuku'alofa occurred was Mu'a, the next largest town on the island. It accounted for over half of the migrants from the mid-eastern district. This gave rise to the hypothesis that there appeared to be some correlation between town size and migration to Nuku'alofa. This was supported in the case of most Tongatapu settlements, in Ha'apai where Pangai-Hihifo accounted for nearly one-third of all migrants from Ha'apai, and Neiafu which accounted for 41 percent of migrants from Vava'u. These figures were in excess of their share of the population of their respective groups. Migration to Nuku'alofa appeared more significant from the larger towns, while migration from the smaller settlements appeared more rurally orientated.

Although the larger towns were generally not the most affected by out-movement there is no evidence of significant 'short distance rural-urban' or 'step' migration towards them such as has been noted of [602] migratory movements elsewhere.[21] This is understandable when one considers the limited—and declining—attractions of these towns, the ease of transport to Tongatapu, and the Tongan kinship network which [602] ensures a welcome in almost every major island of the kingdom.[22] The precise destination of the migrant is usually determined by where he has relations on whom he can depend for shelter, food and often land.[23] If he has no relation in Nuku'alofa he will move to relations in rural Tongatapu, and if later he finds work in Nuku'alofa he may choose not to change his residence because of the short distances involved. It is well to recall the limited size of Tonga when making comparisons with migratory movements in larger countries.

Migration from Ha'apai, as expected, was of greater significance. This group is densely settled, it had the lowest growth rate in the kingdom, migration was more male-dominated, and it had the lowest proportion of children in the school age group. Migration from Ha'apai further demonstrated the importance of traditional, and especially kinship ties in forging a migratory chain. An example of this was Ha'ano, on the island of the same name, which had a very high migration rate. Early contact with Seventh Day missionaries had led to the migration of several families to Nuku'alofa. Several of these, taking advantage of better education gained through contact with the mission, became influential citizens. The significance of education in improving status, and the increased obligations towards one's kin consequent on this improved status, was reflected in the number of fellow villagers who followed upon the initial movement to Nuku'alofa. In the larger Ha'apai islands there was a definite correlation between population density and

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[21] See McGee (1965): 209.

[22] As, for example, evidenced by gift exchange. See Walsh (1969b): 97.

[23] Walsh (1969b): 95.

out-movement, but this did not appear to be a factor causing migration 161
to Nuku'alofa as distinct from movement to rural areas in Tongatapu 162
and elsewhere. 166

Migration from Vava'u to Nuku'alofa in 1956 was not especially 361 significant. Population densities were relatively low; the main island is the third largest (33 square miles) in the group, and is quite fertile. There appeared, in 1956, to be no reason why access to land should be difficult. At that date, two-fifths of the migrants came from Neiafu and were children in the school age group. Educational opportunities therefore appeared to be the main goal attracting migrants, whereas land and employment were more clearly the main causes of migration from Ha'apai. Since 1956 the Vava'u pattern has changed considerably, as we have already seen. The main reasons for this would seem to be: government failure to distribute *'api tukuhau* although land is available, the low level of capital invested in the group, banana crop failures and the low price for copra. However, from the figures available, there is no way of knowing whether this new movement has affected the rate of migration to Nuku'alofa, as distinct from the rural areas of Tongatapu. For this, access to the sorting cards of the 1966 census would be necessary.

The accelerated out-movement from Vava'u in the last decade has added further to the economic imbalance among the islands. Out-movement from the tiny, scattered islands of Ha'apai is long-standing, readily understandable in terms of their resources and in economic terms is probably justifiable. Movement of this magnitude from the much larger and more fertile islands of Vava'u (and especially from 'Uta Vava'u) with relatively low population densities and much economic potential appears to have less economic justification in terms of the overall development of Tonga's resources.[24]

MOBILITY AND ECONOMIC DEVELOPMENT

Kirk, among others, has stated that "mobility is an integral part of 161
economic and social development".[25] While there can be no doubt 162
that the accelerated movement of population noted in Tonga is a result 166
of economic and social change, such changes do not represent economic development while the rate of movement so far exceeds the rate of economic growth. Parts of rural Tongatapu can still absorb more migrants but the rate of movement cannot be sustained indefinitely without seriously depleting soil fertility, unless there are radical changes in the system of land use and tenure. In the present political climate these appear unlikely. One wonders, also, just how long those at the end

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[24] See Walsh (1967a) (1967b).

[25] Kirk (1958): 16.

42: Walsh K-4,5 (no date) 1970 OU9 Tonga OU9

161 of the migratory chain will observe traditional obligations towards their
162 fellow kinsmen which to date have tempered the full effects of migration.
166 If continued migratory pressures should cause a change of values
at this level, it seems highly probably that attitudes towards authority,
rank and status in general will also change. This could have serious
consequences for government.

The effects of migration on the outer islands should also not be
[871] under-rated. Informants stated that boys successful in their schooling
did not return from Tongatapu.[26] The outer islands are therefore losing
their most talented youth, people who could become what Breese
calls 'representatives of decentralising government programs.'[27] The
decline of commercial activity has lead to an exodus of a small but
vital group of part-Tongans and Europeans, and many Tongan families
exercising traditional roles of leadership have also left for Tongatapu.

464 Even more serious is the rapid growth of Nuku'alofa where, despite
162 government efforts, the number of jobs available continues to decline.
Nearly half of the males in the working age group (20-59 years)
423 claimed, during fieldwork in 1963, to be employed in agriculture. It
162 was then estimated that some 31 percent of household heads were without access to land. The 1966 census showed the situation to be more
serious: Fifty-eight percent of all Tongan males were without land,
and 83 percent in the 15-29 year age group; while 67 percent of
Nuku'alofa males had no land, and the figure for the 15-29 year age
464 group could also be expected to be higher. While Nuku'alofa accounted
162 for a higher proportion of those in non-agricultural activities in 1956,
women constituted 35 percent of the work force and government provided over a quarter of the jobs. As the percentage of those employed
in non-agricultural activities decreased slightly (20 to 19 percent)
between 1956 and 1966, it is clear that the overall employment situation
had deteriorated. When one realises that 'persons entering the work
force in the next ten years will be eight times greater than those retiring'
the task of providing further employment is formidable.[28] In such a
situation it will be politically disastrous if measures are not designed
to create an increasing number of jobs and to encourage people to
remain in rural areas.

179 Hirschman has suggested three alternatives in planning: dispersal, concentration on growing points, and the promotion of backward areas. Both he and Lewis have argued strongly for a concentration on growing points, claiming that 'unbalanced growth . . . sets up pressures,

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[26] Walsh (1964): 165.

[27] Breese (1966): 42.

[28] McArthur (1963): Table 3, estimates those seeking non-primary employment would number 13,460 by 1971, assuming no expansion of primary industries since 1956, and 9,030 if such expansion is commensurate with the growth of the work force.

433 2. Growers suffer from a lack of incentives. One example of this
245 is the low price they are paid—45 percent of that obtained by
[435] the Copra Board.

[434] 3. A feeling of malaise and neglect by government in the outer islands.
[829] They have received directly only about 10 percent of development moneys, yet government needs to be *seen to be active* in this and other ways.

[829] 4. A fatalism which assumes that God and Government will eventu-
[181] ally provide, which obviates the need for individual action.

[829] 5. The panacea of tourism, the discovery of oil and other ventures that are expected to produce Kuwait-type returns. This obviates the need to turn seriously to agriculture.

181 In a society where initiative belongs to the chiefs, government is
622 the only significant innovator. As most of the reasons for low production
565 seems to be cultural in origin, cultural solutions are most likely to solve
659 them. This, initially, means a reappraisal of priorities and a reallocation
000 of funds; a close examination of present methods of land use and land tenure; a revised education system which places less stress on academic learning; and the use of radio and other media to 'play-down' the attractions of Nuku'alofa and Tongatapu, for these are often highly exaggerated in the minds of the islands' population. Only direct government intervention can reduce migration to a rate where it more closely approximates economic development.[34] And as all of Tonga is a 'backward area' in relation to the countries with which it has economic connections, direct government intervention from these countries is also necessary to stimulate and maintain development. This, basically, requires better trade and shipping conditions and a higher rate of investment, not an increase in aid which in itself is unlikely to stimulate growth.

CONCLUSION

161 In summary, population movement is not new in Tonga. While some
162 older patterns, such as dispersed settlement, the full occupance of the
361 smaller islands adjacent to Tongatapu and 'Uta Vava'u, and the siting
166 of settlements in areas where there is a balance of land and sea resources, appear to have gone or been severely modified, other trends suggest the re-establishment of older patterns—the resettlement of some of the volcanic islands, possibly a more widespread use of the interior of islands, and the pre-eminence of Tongatapu and its capital, Nuku'alofa, which in a limited political sense could be considered the modern counterpart of ancient Mu'a with all its attendant powers of central authority. Other patterns continue—population moves among

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[34] Cf. Myrdal (1966): Chapters 3, 4.

islands as a constant readjustment between real and assumed ex- 161
pectations, and movement is still much influenced by social factors 162
concerned with reciprocal obligations of kin, of chief and commoner, 166
of the village, the church, of factors concerned with social cohesion and 361
unity.

Some new patterns have emerged. The high southern *liku* coast of
Tongatapu is attracting population as other areas become more con-
gested. Many villages have grown beyond the expected optimum size for
social cohesion, and some have coalesced.[35] It seems likely that new 571
social groupings will cut across the village and possibly undermine kin 602
groupings which, to date, have eased problems often associated with
population increase and movement elsewhere. Many of the factors in-
fluencing population movement are new, the two most obvious and 178
important being education, which permits social mobility in a society 871
still noted for its rigid stratification, and money, the wherewithal to 555
achieve many new expectations, and increasingly a necessity for even 565
the most isolated islander. Nuku'alofa is no longer a village; it has 436
many of the characteristics of a town, and its rapid growth, its problems 171
and attempted solutions tally with patterns of urbanisation in other parts
of the Pacific. Moreover, the pace and direction of movement—to 166
Nuku'alofa and Tongatapu—have prompted government development 179
policies which have further exaggerated the economic imbalance among 361
islands, leaving Vava'u with land tied up in title disputes and Tongatapu
overflowing with people who have migrated in anticipation of oppor-
tunities which must often exclude the legal occupance of land.

Traditional attitudes to kin, rank and land have helped Tonga to 178
meet the problems associated with population growth and movement
with little social distress. This is true of the past, it is still true today,
but it is not certain that it will be true of the future.

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[35] Spillius (1959) considers the question of optimum village size. There were 13 settlements with over a thousand population in 1966. These accounted for 46.3 percent of the total population.

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SHIFTING CULTIVATION AND POPULATION GROWTH IN TONGA

by

ALARIC MAUDE

The relationship between population growth 121
and agricultural systems has been a central question
in some of the recent geographical work in the Pacific
Islands (e.g. Brookfield, 1962; Clarke, 1966;
Lea, 1965). This paper seeks to contribute to this [161]
body of research through a study of the effect of
population growth on the agricultural system of Tonga, an island group which in common with a number of other South Pacific territories has experienced rapid rates of population increase in recent decades. The study also attempts to assess the extent to which the arguments of Ester Boserup on the relationship between agriculture and population growth can be usefully applied to the process of agricultural change in Tonga. Boserup's thesis (Boserup, 1965) essentially is that the intensification of traditional agricultural systems from long fallow to short fallow to multi-cropping occurs only when forced by population pressure, because such intensification involves an increase in labour input and a decrease in output per man-hour. She therefore regards the agricultural system as the dependent variable in the relationship between population and agriculture, and explains differences in cultivation systems as the result of differences in population densities.

THE AGRICULTURAL ENVIRONMENT

The chain of some 150 islands in Western Polynesia 131
which forms the Kingdom of Tonga has a 161
total land area of 256 square miles and supports a
population of about 81,000 (1968). The economy 433
is overwhelmingly agricultural, and is based largely
on subsistence food cropping and the export of 439
bananas, copra and desiccated coconut. Over 90 361
per cent of Tongans live in the three main groups 133
of Tongatapu, Ha'apai and Vava'u (Fig. 1), where
almost all the islands are of raised limestone
formation. The climatic variable of greatest agricultural 132
significance is rainfall, which increases from a mean of 67 inches at Nuku'alofa (Tongatapu) to

wettest months throughout Tonga, but the seasonal pattern differs markedly from year to year. Applying Mohr's definition of a dry month (Mohr, 1944)[1] Nuku'alofa and Pangai have much the same incidence of dry conditions (with 23 and 25 per cent of all months in their respective rainfall records classed as dry), and are appreciably less humid than Neiafu with only 16 per cent of months classed as dry. 132

With the exception of some of the western Ha'apai islands, where the soils are underlain by tuff, all the soils in the three main groups are underlain by coral limestone, but the major parent material appears to be the volcanic ash which has covered all the raised limestone islands. The main soil type is a fertile, friable soil termed *kelefatu* by Tongans and varying in texture from a loamy sand to a clay. The other significant type, *tou'one*, is a sandy and less fertile soil found at low elevations near the sea, and is proportionately most important in Ha'apai. About 85 per cent of the total area of the raised limestone islands is suitable for cultivation. 134

Most of the agricultural land has been surveyed into allotments which are generally eight and a quarter acres in size, except in Ha'apai and parts of Tongatapu and Vava'u where because of the population density, holdings have been reduced to between three and six acres. The allotments are held by individuals as lifetime inheritable leaseholds, but about 60 per cent of those males entitled to land do not in fact have an allotment and either borrow the use of land or depend entirely on other types of employment (Maude, 1970). 241 423

Population distribution is uneven. In Ha'apai, southeastern Vava'u and western Tongatapu crude population densities are comparatively high and range from about 450 to 700 persons per square mile, whereas in western and northeastern Vava'u and central and eastern Tongatapu densities are around 200 to 300 persons per square mile.[2] These contrasts in population density date back to at least the nineteenth century and probably earlier and 161 162 [134]

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[1] A dry month is one in which rainfall is less than 60 mm (2.36").

[2] Population densities are based on the 1966 Census (Kingdom of Tonga, 1968).

cannot be explained by variations in land quality. 161
Climatic and soil conditions in Ha'apai do not seem 162
dissimilar to those in Tongatapu, although in Ha'- 134
apai the less valuable *tou'one* soil type occupies a
greater proportion of the total land area than in
Tongatapu; neither is there any evidence to suggest
that land in western Tongatapu is inherently more
productive than land in eastern Tongatapu. The 361
main explanation appears to lie in the relationship
between settlement and marine resources. Seafoods [262]
have always been valued items in the Tongan diet,
although fishing and reef-collecting have declined [226]
in recent years as canned meat and fish have become
more easily obtainable. Village settlement therefore
tended to concentrate where there was a good balance
between the resources of the land and the sea.
Where shores and reefs were productive but the 361
land area limited, as in the small islands of Ha'apai 161
and the narrow western point of Tongatapu, population
densities were higher than where productive 162
shores were backed by more extensive land areas,
as in central and eastern Tongatapu, or where unproductive
shores limited village settlement, as
along part of the south coast of Tongatapu. The
population growth of the present century has quickly
brought problems of land shortage to the former
areas.

THE AGRICULTURAL SYSTEM

241

The basis of present Tongan agriculture is a bush fallowing system for the cultivation of tubers, the term *bush fallowing* being used to denote a form of shifting cultivation in which the fallow period is short (Morgan, 1959; Watters, 1960.)

The agricultural cycle begins with the selection of a plot for clearing, burning and planting, the selection being based on the requirements of the crop to be grown and the land available to the gardener. Tongans judge land by the type of soil, by the growth of vegetation and by their previous experience in cropping, but because of land shortage and the system of land tenure the area available to choose from is limited, despite the common practice of borrowing the use of land. Where the soil is 244
considered to be sufficiently fertile a yam patch (*ma'ala*) begins the cropping sequence, and most

The areas of high population density are the western 161
end of Tongatapu and all but one of the islands of 162
Ha'apai, and population densities in these areas
have roughly doubled since 1931 (Table 1). The 128
analysis is based partly on material collected by
observation and questioning throughout Tongatapu
and Ha'apai, and partly on more detailed data for
three villages with moderate to high population
densities (Table 2 and Fig. 1).

In areas of high population density fallow periods 241
are shorter and cropping periods tend to be longer 182
than elsewhere. In Ha'apai the cropping period is
usually from three to five years, compared with the
two to three years more common elsewhere. This 241
is indicated by item 6 of Table 2, for the ratio of
total per capita garden area to the per capita area 128
cleared in 12 months gives an estimate of the life 182
of gardens. The figure for Holopeka, however,
appears rather high, as in this village few gardens
were seen which had been cropped for more than
four years, and it seems likely that for some reason
a smaller area than was usual had been cleared for
new gardens that year.

The length of the fallow period, on the other 241
hand, is only one to three years in Ha'apai as com- 182
pared with three to five years elsewhere. This difference is also illustrated in Table 2, which shows the median fallow period (item 8), although the figures are based on too few gardens to be conclusive. Many farmers interviewed in Ha'apai claimed to be using shorter fallows than when they began

TABLE 1. POPULATION DENSITIES, 1931 AND 1966 161
(PER SQUARE MILE) 162

DISTRICT	1931	1966
Ha'apai*	316	517
Western Tongatapu**	248	540
Remainder of Tongatapu***	85	335

* Excluding Tofua, Kao and the unsettled islands.

** Including the villages from Ha'atafu to Fo'ui.

*** Excluding Nuku'alofa and the surrounding settlements of Hofoa, Puke, Sia'atoutai, Fatai, Haveluloto and Tofoa, and their lands. This has been done to remove the population of the urban centre of Nuku'alofa, the national capital, from the calculation of population density. [128]

[p. 60-8]

TABLE 2. AGRICULTURAL DATA FOR THREE VILLAGES, 1962

VILLAGE	HA'AVAKATOLO	HA'AKAME	HOLOPEKA
1. Location	Western Tongatapu	Central Tongatapu	Lifuka, Ha'apai
2. Population*	245 (1962)	299 (1962)	147 (1966)
3. Population density (per square mile)	460	390	588
4. Total per capita garden area (acres)	0.37	0.30	0.30
5. Per capita garden area cleared in last 12 months (acres)	0.18	0.17	0.05
6. Ratio of items 4 to 5	2.6	1.8	6.0
7. Number of households whose gardens were surveyed**	16	13	12
8. Median fallow period (years)	4.5	4.0	3.0
9. Number of gardens on which item 8 is based	12	9	8

* The 1962 figures were collected by the writer. The 1966 figure is from the census.

** These represent sampling fractions of one-third, three-tenths and one-half, respectively.

[p. 61-A]

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182

ing of the cropping period,[1] a change in the food 241
crop pattern, and a complete areal merging of the 182
bush fallow food cropping system and coconut [245]
growing. In some districts the agricultural system
is now quite intensive by shifting cultivation standards, [161]
with a cropping period/fallow period ratio [162]
of about 1:1, and supports population densities of 500 to 600 persons per square mile (cf. Nye & Greenland, 1960, p. 128). However, despite the probable doubling in the intensity of cropping over the last three or four decades there has been no change in the most important element in the system, the technique of maintaining soil fertility. The vast majority of Tongan farmers still depend on a bush fallow, and while fertilizers are increasingly being used for some cash crops this is mostly in central and eastern Tongatapu, where the major commercial banana growers are concentrated, rather than in more densely populated and more intensively cultivated western Tongatapu or Ha'apai. Fertilizers [242]
are not used for subsistence crops, neither have other techniques such as planted fallows, composting, manuring or crop rotations been adopted. The agricultural system remains a fairly simple one, and the unsatisfactory features described in the previous section remain.

Two broad explanations for this lack of change in agricultural techniques can be offered. In the first place, it is possible that under Tongan conditions such improvements are not yet necessary.
The soils, being derived from recent volcanic materials 241
and not subject to intensive leaching in Ha'apai 182
and Tongatapu, are of high inherent fertility. 134
While the increased intensity of cropping appears to have resulted in a moderate decline in fertility status, it is possible that yields have been maintained by the adoption of new crops, particularly cassava. Furthermore, Nye and Greenland (1960, pp. 123, 129) point out that under a bush fallowing system it is possible to crop at varying levels of intensity and fertility without catastrophic consequences to the soil, and that up to a limit decreases in yields resulting from an increase in the intensity of cropp-

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[1] According to Nye and Greenland (1960, p. 123) the general response of shifting cultivators to population increase is to change only the fallow period.

45: Aoyagi E-5 (1962-1963) 1966 OU9 Tonga OU9
Nukuleka

KINSHIP AND BEHAVIOUR IN A TONGAN VILLAGE

121 of Tongatapu Island 16 miles from the capital, Nuku'alofa. This village [101] was selected for field work because it is one of the most isolated villages in Tongatapu and because it is supposed to have retained the traditional way of Tongan life. The size of the village was also suitable for the study. 124 Although I tried to speak the Tongan language as much as possible for my daily life, the information for the study was collected in English through an interpreter who was nineteen years old.

I The Village

The People

162 According to the Government census of 1956(5) the population of 161 Nukuleka was 209 (107 males, 102 females). There were 219 (109 621 males, 110 females) by my enumeration in December 1962. In spite of the rapid population growth of the Kingdom in recent years, the increase 621 of population of this village has been slight. Among these 219 persons, 162 there are 15 temporary residents made up of two families whose heads serve as the stewards for the two different churches in this village. These 621 15 residents being excluded, 204 is the village population. Of these 37 166 were born outside the village (male 10, female 25 and children 2). Eight married men have come from elsewhere and two younger single men live [162] at the home of relatives. The 25 women are married to the villagers. The two children were brought here on their mother's second marriage. Against the 37 who moved in, there are 36 who moved out of this village (male 13, female 23). This figure is the number of persons who are brothers and sisters of the present villagers and were born in Nukuleka but now live elsewhere. It is difficult to count the moved-out otherwise. Most of them, especially women, married out, and a few left the village because they received land in another place or because they were adopted by the relatives.

621 All the inhabitants are Tongan. There are 49 adult men over sixteen 423 years of age who are old enough to be entitled to receive *api tukuhau,* tax allotment, and *api kolo,* town allotment, and at the same time are obliged [651] to pay poll tax according to the Tongan law. The village had been the [659] noble estate held by S. Pangia, but the Government took over direct control in the 1920s.(6) Simultaneously, the Government confiscated extra land from the men who had had larger *api tukuhau* and redistributed them to more villagers. Today, however, only 28 villagers have *api tukuhau* of about 8½ acres each. A further 21 who are entitled to it have not yet received it. The latter borrow the land to cutivate from their [463] relatives or friends. Therefore, all men, without exception, are working [241] the land.

621 Besides agriculture, the villagers are engaged in fishing. The village 226 location being favourable to fishing, a number of men go out to sea nearly [432] every day. Most of the fish are consumed within the village, but a few

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5. Report on the Result of the 1956 Census by Authority, 1958.
6. In the map after Gifford (1929) Nukuleka was a noble estate held by Paniga. A villager told me that the Government had examined the documents of the village in the law court and had taken it lawfully from him, although I could not find the record in the office.

131 Tongatapu and 'Eua islands and a few smaller islets. The 131 Ha'apai Group consists of numerous small atolls. Fifteen of 162 161 these were inhabited at the time of the 1966 census. The total area of the atolls of Ha'apai that were inhabited in 1966 is 20.1 square miles, with a population density of 521 131 per square mile. The Vava'u Group lies to the north-east of Ha'apai. Like Tongatapu, it has a main island that gives its name to the Group and a cluster of atolls nearby.

The distance between Nuku'alofa and Neiafu, the main towns of Tongatapu and Vava'u, respectively, is 165 miles (usually a matter of three days' journey on the government 132 passenger vessel). Within this distance the climate varies from tropical in the northern islands to sub-tropical in the south, with a mean annual rainfall of 86 inches in Vava'u and 67 inches in Tongatapu (although with considerable variation from one year to the next).

Yams, taro, sweet potato, manioc, breadfruit, bananas, 241 [184] plantains, coconuts and watermelons are grown throughout Tonga, albeit in differing proportions in different parts of the country. Except for breadfruit, these crops yield all year round, and all but watermelons are important 241 subsistence crops. The principal cash crops are bananas, 433 [439] coconuts and watermelons. Bananas and coconut products (copra and dessicated coconut) make up more than 90% of the value of Tonga's exports. The nation's economy is based on

241 433 peasant production; the value of subsistence crops produced for local sale is negligible.

Population

161 [162] The population of Tonga at the census of 1966 was 77,429, of whom 98.31% were classified as Tongan (in contrast to others such as Europeans, part-Europeans, and other Pacific Islanders (Fiefia 1968: 7). The population total reflects an annual rate of increase of 3.24% in the period since the previous census, which was held in 1956, compared with 2.94% during the preceding intercensal period, 1939-56. [163] [165] The difference is explained not so much by any great change in the birth rate as by a reduction in the death rate. Table 1 shows population totals over a period of about fifty years, beginning with the census of 1911, the earliest census for which there are published figures available.

Population projections made by Norma McArthur, an Australian expert in Pacific demography, indicate an estimated population of more than 100,000 by 1975 and more than double the population of 1956 by 1980 (Kingdom of Tonga Economic Survey of Tonga 1970: Appendix A.1). These projections, based on the findings of the 1956 and 1966 censuses, assume the maintenance of age-specific fertility rates and continued slowly falling mortality rates, with no significant outmigration. McArthur's projections appear to be slightly on the high side, for her estimate was that the

[TEXT CONTINUED ON PAGE 40]

TABLE 1

Census Enumerations in Tonga in Various Years, 1911-1966 161

Year	Enumerated population	Average annual rate of increase
1911	23,017	
		0.83
1921	24,937	
		1.56
1931	28,839	
		2.29
1939	34,130	
		3.91
1956	56,838	
		3.62
1966	77,429	

Sources: 1911-1939, McArthur 1968: 79-82;
1956-1966, Fiefia 1968: 6.

161 population in 1970 would be 87,406, whereas the Report for the Department of Justice for 1970 (1971: 3) indicated an estimated population of 86,005 at the end of 1970, based on the number of births and deaths registered during the year. However, in commenting on the results of the 1956 census, McArthur notes that "neither the birth nor death registration is very complete" (1968: 96) and that it is therefore necessary to make adjustments for under-registration. We must therefore await the report on the census held in December 1976 before we can properly gauge the accuracy of McArthur's projections.

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162 Table 2 presents a comparison of the results of the 1956 and 1966 censuses, and shows the distribution of population among the inhabited islands. The results of these censuses indicate that there is no need to look far into the future to see that Tonga faces problems of population pressure. While the density of population was 211 per square mile in 1956, by 1966 this had risen to 288 per square mile. Moreover, these figures refer to the total land area of Tonga, including uninhabited and largely uninhabitable islands. Thus, a better statement of the reality of the situation is that the density of population on the inhabited islands was 324 persons per square mile, compared with 274 in 1956. Possibly the most significant datum to emerge from a comparison of the results of the 1956 and 1966 censuses is that, while the population as a whole

[TEXT CONTINUED ON PAGE 42]

TABLE 2

Intercensal Changes in the Distribution of Population among Inhabited Islands

Island/Group	Area (sq. miles)	Percentage of total population 1956 N=56,838	1966 N=77,429	Intercensal increase in population %	Density per square mile 1956	1966
Tongatapu Group (4 islands)	133.61	58.4	66.3	+ 54.6	248	384
Ha'apai Group (15 islands)	20.10	17.4	13.5	+ 5.5	493	521
Vava'u Group (13 islands)	46.03	22.0	17.5	+ 8.5	272	294
Northern islands excluding Niuafo'ou (2 islands)	7.62	2.2	1.8	+ 11.2	165	183
Niuafo'ou Island	13.41	NA	0.8	NA	NA	45
Tofua Island	18.05	NA	0.2	NA	NA	7
TOTAL	238.82	100.0	100.2	+ 36.2	274	324

Sources: Fiefia 1968: 38, Tupouniua 1958: 43.

161 increased by 36.2%, the increase was not uniform throughout
162 the islands. On the contrary, there was an absolute
decrease in population on nine islands, and only two islands
of more than one square mile in area had an increase in
population of more than 20% over the figure for 1956. These
are the islands of Tongatapu and 'Eua.

131 'Eua is a large island a few miles to the south-east
133 of Tongatapu. Because of intervening reefs, it can be
[505] reached only by a roundabout passage after a very rough
[313] sea-voyage of about five hours. The island rises in a
series of rocky terraces to about 1,000 feet above sea level,
with steep valleys that are the major source of timber in
Tonga, leaving relatively little land suitable for cultivation.
For these reasons, the island is not very attractive
161 for settlement. At the time of the census of 1939, the
162 population of 'Eua was only 480. After a volcanic eruption
164 [731] on the northernmost island of Niuafo'ou in 1946, many of
the people of that island were settled on 'Eua; at the
census of 1956, more than 40% of the population of 'Eua over
the age of nine had been born on Niuafo'ou. Besides this
Niuafo'ou influx, the increase in the population of 'Eua
is accounted for largely by migration from other islands,
161 especially by men seeking land. Even so, with an intercensal
162 population increase of 76.2%, the density of population on
'Eua in 1966 was only 100 per square mile, almost the lowest
[133] of any island in Tonga. Moreover, while there is still some

161 162 133 land available on 'Eua for settlement and cultivation, there is no possibility that the island could support the kind of density found on most of the other islands, owing to the nature of the terrain.

161 162 166 [131] As Table 2 indicates, the burden of intercensal population increase and inter-island migration has fallen mainly on the island of Tongatapu. Tongatapu has 40% of the land area of Tonga and 60% of the population. The population of the island increased by more than 50% in the ten years between 1956 and 1966. 161 162 368 Much of this increase has been concentrated in the urban area of Nuku'alofa, the capital of Tonga. Thus, while the intercensal population increase for Tonga as a whole was 36%, and the increase for the rural areas of Tongatapu was 42%, the increase for the Nuku'alofa urban area was 79%. This includes the one-time village of Haveluloto, now virtually a suburb of Nuku'alofa, which in 1956 had a population of 292 and in 1966 had a population of 1,334.

161 162 166 In summary, there have been two kinds of population flow in Tonga associated with the increase in population. One kind of migration has involved settlement on islands that have land available for cultivation (primarily the island of 'Eua, but also some resettlement on Niuafo'ou beginning in 1958). The second flow has been towards the island of Tongatapu. On the remaining islands, the total number of people has remained relatively constant, but

this is only because there has been considerable migration 161
from these islands. 162 166

It would seem, then, that insofar as there has been 161
pressure resulting from increased population, this has been 368
concentrated in the Nuku'alofa area. To that extent, the
problems of increased population in Tonga are mainly the
problems attendant on rapid urbanization. However, that is 166
not the full story, for the movement to Nuku'alofa is 423
largely related to the landless condition of many of those 162
who have migrated (Walsh 1969). According to the census 162
of 1966, 52% of all adult males (i.e., men aged twenty and 423
over) had no land to their names, whereas two-thirds of
the men living in the Nuku'alofa area were landless.
Unfortunately, there are no comparable statistics available
for 1956, as no question about land ownership was asked in
that census. There is no doubt, however, that landlessness
is a growing phenomenon, related to rising population. This [561]
can be seen , for example, in the figures on land-holding,
which shown an inverse relationship between landlessness and
and age (see Table 3).

The significance of increasing landlessness stems from 162
the fact that Tonga is largely a country of peasant 423
proprietors, of people engaged in agriculture for household 241
consumption and export who work on land that is under the
control of a member of the household. In the census of
1966, 70% of all Tongan men between the ages of twenty and

[TEXT CONTINUED ON PAGE 46]

sixty were classed as being engaged primarily in agriculture 162
for household consumption and export. This is a figure for 423
the total population, including men who reside in the towns. 241
As Walsh points out in a paper entitled "A Tongan Urban
Peasantry?",

> Town dwellers are inescapably bound up with the land.
> They own it as much as villagers, they rely on it to [465]
> supplement wages kept low on the assumption of an
> additional income from agriculture, they value it as
> a means of fulfilling family obligations and as a
> measure of their social importance and they depend on
> it for food (1969: 93).

The figures on external trade (quoted earlier) further 439
indicate the role of agriculture in the Tongan economy: 423
throughout the 1960s, bananas and coconut products made up
over 90% of the value of Tonga's exports. Furthermore,
there are no grounds for anticipating the development of
non-agricultural exports on any significant scale. In the 315
late 1960s, much hope was based on the possibility that explorations
for oil would prove fruitful. This has not yet
materialized, however. And in trying to develop non- 439
agricultural industries, Tonga is in the difficult position
of having to compete with Fiji and Western Samoa, both of
which enjoy relatively large home markets and are also more
advantageously placed to export their goods.

In view of Tonga's dependence on agriculture both for 311
subsistence and export, the rising population figures are 161
cause for concern about increasing pressure on land as an 241
agricultural resource. A figure for 1963 gives the extent [134]

of land suitable for cultivation as amounting to 92,447 311
acres, approximately 60% of the total land area (Great 161
Britain 1965: 21), and it is unlikely that arable land can 241 [134]
be increased significantly. This means that higher yields
of subsistence crops are required from existing acreage if
the extent of land under cash crops is not to be reduced,
and geographers have already documented changing patterns
of land use and cultivation in Tonga (Maude 1970, 1973;
Thaman 1976).

The question arises whether there is a shortage of 423
land. 'Land shortage', however, is not something that can 121
directly and unequivocably be infered from figures on
population density. Rather, it implies a scarcity of land
to meet local needs given the available technology, and
varies with the definition given to 'scarcity' and 'local
needs' as well as being dependent upon practices of land
use and the level of technology. In the case of Tonga,
however, the definitional problem falls away, for there is
a readily available index of land shortage. According to 423
Tongan law, every Tongan male aged sixteen and over is [651]
liable for an annual poll-tax, and every poll-tax payer is
entitled to an allotment of agricultural land measuring
100 fathoms by 100 fathoms (approximately 8¼ acres).
Whether there is sufficient land to provide these allotments [162]
can be taken as a criterion of whether or not there is a
shortage of land, and by this criterion there is a definite

is that landlessness in Tonga is a growing phenomenon. Scarcity of land is not a recent factor in Tongan society.[2] What is new about the present situation is the phenomenon of widespread and growing landlessness, and this phenomenon is directly associated with the rising growth of the population. 423 162 [161]

Historical Background to the System of Land Tenure

Given the facts of land tenure and people's dependence on agriculture, it is clear that the organization of access to and control over land is crucial for any discussion of contemporary social organization in Tonga. Indeed, many features of the system of local organization are incomprehensible without reference to the system of land tenure and some understanding of how that system came into being. As Diaz and Potter stress in their essay on peasant society, "it is impossible to understand the social life of a peasant community without taking state policy and its history into account" (1967: 167). 423

The present system of land tenure in Tonga came into

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[2] Since Tonga is a country of many small islands, it might be expected that land would be relatively scarce in some areas, and hence a valued resource. Even in 1882, when the present system of land tenure was introduced, land was comparatively scarce in Ha'apai and in the western part of Tongatapu (Maude 1971: 111).

The chapter first describes the layout and look of the village, followed by an account of the history of settlement at Motulahi and a brief demographic description of the people resident in the village at the time of my fieldwork. It will be seen that the effects of increasing population and inter-island migration have been marked in Motulahi for more than thirty years and have contributed to the diversity of the present population. Materials presented in this chapter also illustrate something of the possible range of variation in the relationship between a Tongan noble and his people, particularly as this relationship is affected by population pressure and other developments in Tonga over the past few decades.[1]

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The Look of the Village

Motulahi is located about six miles from Nuku'alofa. The residential part of the village lies on either side of a mile-long section of the main road running from town towards the eastern end of the island. Immediately to the north is the marshy area that borders the lagoon, while on the other side agricultural allotments run about a mile and a half to the sea (see Map 4). As in all Tongan villages, **kolo** (the residential part of the village) is distinct from **'uta** (the land divided into agricultural allotments). In

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[1] For further description of relations between a noble and his people, see Marcus (1976) and Rogers (1968).

621 land a-plenty to give out in Tongatapu, whereas the growth
622 of population was rapidly reducing the amount of land that
166 would be available in the future for new allotments in
161 Tungua. And, indeed, today there is a severe shortage of
162 land on Tungua, as there is on other islands in Ha'apai.
According to the census of 1966, the island of Tungua
had a population of 444 with a land area of less than three-
161 quarters of a square mile. The following is a report on
162 the land-holding situation on Tungua in January 1970,
423 written by a social anthropologist who conducted fieldwork
on Tungua in 1969-70:

> There are 90 bush allotments . . . on the island covering an area of some 240½ acres. They range in size from 1¼ to 8¼, only one being this last area . . . The average mean size is 2.6 acres . . . over one half are three acres or less. Preliminary figures on landholding reveal that there are 14 out of 57 (or 24.3%) households without registered land (that is, without legal title to land and therefore no security of tenure); in addition to the 14 heads of household without such title there are 33 sons over 18 in the same situation (Garth Rogers, personal communication).

621 In encouraging his people to move to Tongatapu, Sione
622 Fatu also pointed out that with increasing modernization
166 and especially the drive for education, Tongatapu would
inevitably become the center for development and that people
would be well-advised to move to the main island ahead of
[873] the waves of migration that were bound to occur. Sione
[658] Fatu's foresight regarding national trends is also reflected
[425] in the fact that in the mid-'forties he made available about

622 of 8¼ acres. In consequence, there had been land available
423 for these men's sons when they grew up, without the
659 necessity of requesting land from the noble. These allot-
425 ments were also registered, and thus Sione Fatu was
perceived as a generous noble who gave land freely to those
who needed it.

Sione Fatu died in 1962, leaving no children. He was
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621 succeeded by his brother, Havea Veikune, who is the present
noble of Motulahi. In contrast to the growth of village
population during the period that Sione Fatu was the noble,
there has been little growth of village population since
162 the succession of Havea Veikune. In the report on the
161 national census of 1956, the population of Motulahi
621 numbered 1,093, compared with 1,122 in the census of 1966
and a total of 1,192 in my census of the village in 1970
(see Table 6). Thus, in the years between 1956 and 1970,
the population of Motulahi increased by less than 10%,
whereas the national population increased by 50% during the
same period. It should also be noted that if birth and
death rates were the same in Motulahi as they were in the
rest of the nation (and there is no reason to believe that
they were significantly different), then for the Motulahi
population figure to have remained fairly constant, there
must have been a net outflow of population from the village.

621 The people of Motulahi account for the standstill in
622 village population figures by contrasting the policies and
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TABLE 6

Comparison of Population Growth in Motulahi with the National Rate of Growth

Year of enumeration	Population enumerated in Motulahi	Percentage increase since the preceding enumeration	
		Motulahi	National
1931	159		
1956	1,093	587	97
1966	1,122	3	36
1970	1,192	6	13

Sources: 1931 - Wood (1932).
1956 - Tupouniua (1958)
1966 - Piefia (1968)
1970 - fieldwork survey; Report of the Department of Justice for 1970.

TABLE 7

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Population of Motulahi 1970, Enumerated by Sex and Age and Compared with the National Population (1966)

Age Category	Motulahi				National
	Number			%	%
	Males	Females	Total	(N=1192)	(N=77,429)
0-9	202	168	370	31.0	33.4
10-19	183	147	330	27.7	22.9
20-29	81	93	174	14.6	15.1
30-39	53	65	118	10.0	11.2
40-49	54	51	105	8.8	7.8
50-59	23	23	46	3.9	4.6
60-69	12	15	27	2.3	3.0
70-79	8	6	14	1.2	1.2
80-89	-	4	4	0.3	0.5
90+	1	2	3	0.3	0.1
Unknown	-	-	-	-	0.2
TOTAL	617	575	1192	100.1	100.0

Sources: fieldwork survey; Piefia 1968; 50-52.

TABLE 8

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Significant Differences between 15-19 year olds and 20-24 year olds, Nationally and in Motulahi

Criterion	National census, 1966		Motulahi 1970			
	15-19 (N=7,825) %	20-24 (N=6,219) %	15-19 (N=147) No.	%	20-24 (N=103) No.	%
Persons who are still students	77.1	7.4	116	78.9	18	17.5
Married persons	4.1	33.0	2	1.4	33	32.0

Sources: Piefia 1968; fieldwork survey.

47: Decktor Korn E-5 (1969-1970) 1975 OU9 Tonga OU9
Tongatapu
Motulahi

121 feature characteristic of these societies is the optative and changeable nature of the composition of household groups.

Fluctuating patterns of household composition have received less attention than other features that are characteristic of Oceanic societies. Usually they are discussed within the context of studies of land-holding groups, and they have generally been treated either as a secondary aspect of ecological adaptation or as a by-product of the flexibility of social organization in these societies. Studies that focus on actual settlement patterns, however, are more actor-oriented than are studies of land-holding groups. This different focus directs attention to what I take to be a lack of conceptual clarity in the use of such terms as "option" and "choice" in discussing the diverse behavior of different people in a society. This problem emerges in the final section of the paper, where I consider the meaning of the data that are presented here.

VARIATIONS IN HOUSEHOLD STRUCTURE IN A TONGAN VILLAGE

101 Tonga, a country of about 150 islands, lies east of Fiji and south of [131] Samoa. (It is also known as the "Friendly Islands"—a name given by [195] Captain Cook, who visited Tonga in the course of his voyages of 1773-74 [162] and 1777.[1]) About 40 of the islands are inhabited, with a total [161] population in 1970 of more than 80,000; three-fifths of the people live [131] on the main island of Tongatapu. The total land area of the country is about 256 square miles, two-fifths of which is Tongatapu.

361 Although there are only four centers of administration and com-162 merce in which social differentiation is such that they can properly be called "towns," about one-third of the total population is clustered in these areas (two are on Tongatapu). The remaining population lives in villages that are dotted throughout the islands in a nuclear pattern of village settlement; this settlement pattern is largely the result of practices established during a period of civil war that lasted from 1797 [433] until the mid-1800's. Most of the people who live in the rural areas and many of those who live in the towns are wholly or partially dependent for their livelihoods on peasant agriculture.

592 There is no consensus among Tongans on what composition [829] constitutes the ideal household, but all adults would agree that the ideal household is one in which I, the speaker, am the head. Most Tongans would probably say that a household ordinarily comprises a single family unit consisting of a married couple and their unmarried children. Not all households conform to this pattern, however. In fact,

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[177] [1] Tonga was first visited by Europeans in 1616, but sustained contact with Europeans did not begin until almost the end of the 18th century. Despite considerable European intervention [777] since then, including the Christianization of the entire population before the end of the 19th [648] century, Tonga has remained formally independent. In 1970, the Kingdom of Tonga joined the British Commonwealth of Nations.

49: Rogers A-4,5 (no date) 1969 OU9 Tonga OU9

SOME COMMENTS ON THE "REPORT ON THE RESULTS OF THE 1966 CENSUS", KINGDOM OF TONGA, 1968[1]

Garth Rogers

659 The 1966 census of Tonga was modelled in planning, method, analysis and presentation on its highly successful predecessor of 1956. The 1966 material is intended to be directly comparable with that presented a decade earlier, with the addition of data on land-holding. The census of 1956 was the first in Tonga to benefit from the methods and principles of scientific demography; the census officer M. U. Tupouniua, a graduate of Auckland University, acknowledged his gratitude to Dr Norma McArthur, experienced demographer of South Pacific societies and at that time Census Commissioner for Fiji.[2] The 1966 Report was prepared by Sione Fiefia, a graduate of Hawai'i University; M.U. Tupouniua and Dr Zwart, Census Commissioner for the Fiji Government, were among the advisers and consultants. Much of the processing of census material was done in Fiji on an IBM contract; the total cost of the census was reduced by judicious accounting from the 1956 figure of sixpence per head of population to fourpence per head. The review which follows presents the statistical facts and a commentary on their social significance.[3]

● 161 162 The total enumerated population of the Kingdom on 30th November 1966, was 77,429 persons, 98.31% of whom described themselves as Tongans. This represents an increase of just over 36% (20.591) on the 1956 population (56,838), an average annual intercensal growth of over

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[1] Because similar articles have since been published in other Journals, the writer has asked for it to be made clear that this article was accepted for publication in January 1969 (Ed.).

[2] TONGA 1958:iv, 2, 5.

[3] I am indebted to Antony Hooper, Karl Tu'inukuafe, and Edgar Tu'inukuafe for valuable comments and criticisms on an earlier draft of this paper, and to Peter Chignell for a personal communication.

3% (possibly 3.46% in 1966). With one half of the population under 161
sixteen years of age and with 33.99% of both sexes in the reproductive 162
age-group (15–44), there is every possibility that present rates of increase
will be maintained if not exceeded in the next intercensal period. On this
evidence the total population would be well over 100,000 by 1976, and
would double between 1966 and 1986.

The overall density of population on inhabited islands in 1956 was 161
almost 277 persons per square mile or 2.31 acres per person. By 1966 the comparable figure was 376.6 persons per square mile or 1.69 acres per person, an increase in overall density per square mile of nearly 100 persons.[4]

The largest increases took place on the principal island Tongatapu 161
where the intercensal growth amounted to 54%; the smallest increases
in overall density occurred in the Ha'apai group, already the most heavily 162
populated islands in Tonga, where the density rose from 480 persons per square mile in 1956 to 523 in 1966. In 1966 the most densely populated of the Ha'apai islands was Matuku where 138 people in 29 "single family units" in 19 households were living on 82 acres (1,062 per square mile).

* * *

The 1966 Report gives warning that overcrowding and shortage of [362]
housing are becoming acute throughout Tonga (p. 35) but the figures
themselves suggest that this rise is a corollary of population movement to [166]
Tongatapu. The figures do suggest that the overall average size of Tongan 161
households has risen from 6.53 persons to 6.7 persons in the intercensal 162
period.[5] But average household size in each of Tonga's three main towns 592
has fallen; Nuku'alofa from 8.04 to 7.96; Pangai, Ha'apai from 8.39 to 7.55; Neiafu, Vava'u from 7.6 to 7.42. On the other hand, in 1956 there were six towns and villages with an average of more than eight, and only one with over nine persons per dwelling whereas in 1966 there were nine villages with eight, and four with an average of over nine persons per dwelling. Most of these were in rural areas of Tongatapu which suggests that rising pressure on housing was more acute in rural Tongatapu than in Tonga overall.

Tongan households are defined in the census first as consumption units, later as sleeping units. Within an *api* 'compound' a sleeping unit and a consumption unit rarely correspond. Family units are defined as spouse(s) and child(ren). Of the 10,942 Tongan households recorded for the entire Kingdom in 1966, 16% or 1,729 contained more than one family unit; 1,454 or 13.2% contained two family units; 244 or 2.2% had three family units; 31 or 0.28% had four or more. Tongatapu Island with 61.8% of the

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4. Thirty-three out of c. 150 islands are inhabited; the total habited land area in 1966 [162]
was less than 15 miles square. Niuafo'ou (13.5 sq. mls.) and Tofua (18.05 sq. mls.),
both partially resettled since 1956, have not been included in the assessment of population density, nor have the unhabited islands of Late, Kao, Hunga Ha'apai, Hunga Tonga, 'Ata and Fonualei, all high and fertile but without harbours or anchorages.

5. Comparable figures of mean household size in other island groups are. Cook Island 1966, 6.5; Western Samoa 1961, 5.7; Fakaofo, Tokelau Islands 1968, 10.4 (Personal Communication, Antony Hooper); Niuafo'ou, northernmost island of Tonga 1967, 6.5.

161 Kingdom's total population, had 58.9% of the total households with two
family units and 63.2% of the households with three or more family units.
162 The Report does not distinguish whether households with several
592 families have come about as a result of grandparents, son and wife, and
grandchildren living in the same household, or as a result of brothers and
their wives sharing one household. It is also unclear how the local census
officers demarcated dwelling units clustered together and cooperating as
the one single household. In many parts of Tonga there is a precedent in
custom for three or even four generations of the same kin-group to live
within the same *'api*, the family unit of the oldest son occupying the main
dwelling with other units (parents and unmarried siblings; families of
[593] married siblings) having separate dwellings around. Because of the
traditional brother-sister *tapu* there may be an additional hut for unmarried
sons. There is less precedent in Tongan custom for two or more
family units of the same generation (e.g. siblings, their spouses and
children) to live within the one dwelling: this could be a criterion of overcrowding.

It seems from the census figure of 16% ("households" with more than
one family unit) that overcrowding is not yet severe in Tonga except in
[342] Nuku'alofa. Here families of siblings are sharing dwellings, and huts are
being built on swamp land. Elsewhere, the occurrence of households
containing more than one family unit may be accounted for as the persistence
of the traditional co-resident extended family, comprising several
generations where each "extra" family unit may have its own separate
dwelling house which may or may not have been recorded in the census
schedule as a household. The increase in average household size has been
accompanied by a fall in average overall acreage of land per household
from 15.08 acres per household in 1956, to 10.98 acres in 1966.

* * *

121 The population densities already discussed have little meaning except
in relation to the availability and utilization of natural, agricultural and
13 human resources. The natural resources of Tonga comprise almost
311 exclusively the soils, reefs and surrounding seas with, in late 1968, an
elusive possibility of oil; the agricultural resources comprise almost
entirely trees—particularly coconut, banana, breadfruit—and ground
crops grown mainly without mechanical aids by slash-and-burn methods.
128 Human resources are discussed at the end of this paper.

Dependence on agricultural produce is enormous; in 1961 and 1964
433 these products amounted to 98.19% and 96.39% respectively of Tonga's
[439] total export earnings with copra (the dried kernel of the coconut) forming
the basis of the economy and constituting over 80% of the visible exports
[241] throughout the 1960s.[6] Agricultural products are the surpluses and
small cash-crops of Tonga's 12,000 or so peasant farmers who are scattered
[463] throughout the Kingdom and rent their allotments either from titled
[427] nobles or directly from the Government.

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[6] TONGA, 1960-1967 *passim*. Total exports for 1961 amounted to £T1,374,658; agricultural exports £T1,349,461; non-agricultural exports £T25,197.

000 would be more likely to succeed on government than on noble estates,
245 and only, of course, in areas where land is available for lease. There is
474 evidence in Tongatapu that some banana-producing cooperatives have
achieved success by using vacant land and employing tractors.

166 A third alternative for landless men is migration, and the 1966 census shows in a number of ways that "... the Tongan population has become mobile, both internally and externally ... the drift of young people from the atolls of Ha'apai especially and rural areas of Tongatapu to Nuku'alofa is probably indicative of this trend" (p. 11).

Tonga now has thirteen towns and villages each with a population of
361 more than one thousand people; nine of these are situated on Tongatapu
island whereas the Ha'apai and Vava'u groups contain only two each.
361 These thirteen towns and villages showed a combined percentage increase
161 of population of 48.3% during the intercensal period, although the two
369 Ha'apai towns combined actually lost population over this period.
Population growth in the nine Tongatapu towns and villages ranged from 34.0% to nearly 357.0% (Haveluloto) for the decade from 1956; Nuku'alofa and suburbs (historically three villages) increased over the same period by 6,483 persons (by 70.0%) to a total of 15,685.

162 Nearly 32.0% of all persons over sixteen living in Tongatapu on the
night of the census were born in other parts of the Kingdom, with 14.4%
361 deriving from Ha'apai and 11.4% from the Vava'u group. Some of these
166 people living away from the place where they were born were undoubtedly
students and temporary residents from the northern islands, but differential rates of increase for Tongatapu (53.2% during the intercensal period) and the Ha'apai group (6.78%) suggest that there is a higher rate of internal migration than could be explained simply by students and visitors. Walsh has described the process whereby temporary immigrants become permanent residents.(12)

Some imbalance between the sexes is apparent in Tongatapu's excess of males "born elsewhere" over females "born elsewhere". Supporting the argument that many of Tongatapu's immigrants derive from Ha'apai, is the evidence that there is a shortage of males in that group; there are only 491 males per 1,000 persons in the Ha'apai district – the only deviation from the national pattern of male predominance.

* * *

582 The average age for marriage has increased since 1956 when over 3.0% of all men and over 9.0% of all women were married in the fifteen to nineteen age-group. The 1966 returns indicate that only about 1.0% of the total male population and just over 7.0% of the total female population in this cohort were married. It is possible that some of the reasons for this delay in marriage are the shortage of land in rural areas, the excess of men in urban areas, the increasing cost of traditional weddings, the shortage of and desire for wage employment and money, and the enormous advantage post-primary education gives to obtaining wage employment.

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12. Walsh 1967:14.

49: Rogers A-4,5 (no date) 1969 OU9 Tonga OU9

655 hard-board, cabinet-making, ship's gear and housing), as well as developments 471 in private industries such as cigarette and tobacco processing, handicrafts, tailoring, boat-building, bread-making, and in government service industries, communications, electricity and water supplies and 457 mechanical engineering. Until 1956, Tonga maintained a favourable overseas trade balance without incurring a national debt. Since 1965, 464 moneys have been borrowed from Britain for development plans. But these developments are not sufficient to employ the increasing numbers of young men migrating to Nuku'alofa seeking work. For example, in 1956, 2.41% of the Tongan male population over fifteen years was engaged in "part-manufacturing and processing"; by 1966 this percentage had risen to 2.78% of the adult Tongan males, an increase of some 192 persons, but Tongan females employed in this category decreased over the same period by some 77 persons, that is, in the decade following 1956 the total number of Tongans employed in "part-manufacturing and processing" industries rose by only 115 to 597 persons. The "services" branch of the economy absorbed an increase of 568 Tongans, "transport and communications" 65, whereas Tongans employed in "commerce" dropped from 786 to 353, a loss of 214 workers. The number of non-agricultural labourers rose during this period from 192 to 786—a gain of 594 workers. [563] Comparable figures for non-Tongan residents in Tonga in 1956 and 1966, show decreases in the number of persons employed in "part-manufacturing and processing" industries (a decrease of 83 persons), "services" (down 63 persons), "transport and communications" (down 24 persons) and "commerce" (down 103 persons). These figures conform with the Tonga Government policy of gradually replacing non-Tongan workers with Tongans.

SUMMARY AND CONCLUSIONS

161 Rapid increases in the Tongan component of the population are 162 occurring: about 38% in ten years; this is producing a very youthful population in which over half of the population is under sixteen years of [163] age. Population expansion is due not to a rising birth rate (which is fairly constant at 3.24%) but to a rapidly decreasing death rate (in 1966 [165] the death rate reached an all time low of 0.29%).

423 Pressures on land are beginning to be felt but are not yet acute because it is comparatively easy for any Tongan to obtain access to land for subsistence purposes. Pressure on the *'api* system as it now stands is very great with possibly well over half of the men eligible for land without 311 land or at least without security of tenure. Possibilities for intensification of land use have scarcely been sought; diversification of crops and scientific methods are, with the exception of the Coconut Replanting Scheme, as yet confined to research stations; large tracts of land belonging to the nobility remain officially unallotted; several high islands are unsettled; larger allotments could be subdivided with the introduction of intensive 362 methods. Pressure on housing is not yet acute except in Nuku'alofa, but 592 the Tongan administration seems to have adopted a European norm of one "family unit" to one household in spite of the traditional custom of

building small dwellings near the main dwelling for siblings of the opposite 362
sex, parents, and married members of the same family. 592

The need to step up the rate of industrialisation is shown by the beginning 423
of land shortages, the increase of adult "landless" men, the indirect 464
evidence of under-employment throughout the Kingdom, and the movement 166
of increasing numbers of rural dwellers to urban centres, especially 369
to Nuku'alofa.

The most spectacular development in Tonga since 1956 has been the 505
acquisition of a national shipping fleet. Before that date, two motorized 655
sailing ketches were the principal means of inter-island transport; all
fuel was imported from Fiji in 44-gallon drums. The progressive, far-sighted [651]
administration ordered the first vessel, *Aoniu* (514 tons), in 1956;
it was delivered in 1958 and by 1960 it had made a gross earning of
£T68,120 with net profits of £T13,970 after providing for depreciation
and other running expenses. The Tongan fleet now comprises seven vessels,
with the largest, *Niuvakai* (1,800 tons), plying between Sydney Australia,
Japan, Fiji, and Tonga. Although great savings are now made each year
on freights to and from the Kingdom, the shipping line has, however,
done little to relieve the need for more jobs in Tonga. Raw materials
could be transported to the Kingdom by these ships to provide employment
in selected (possibly labour intensive) industries. If European and
Australasian governments do not take the initiative by offering experts
for this purpose it is likely that trade and aid may be forthcoming from
Asia, especially from Japan.

Tonga has also shown how a state-owned industry can provide a large 655
degree of independence for a small nation. The Tonga Copra Board and [242]
allied government agencies started with improving the quality of export
copra, and now, with the aid of British finance, have launched a highly
successful Coconut Replanting Scheme throughout the land. Government
industries have already been discussed. Philatelic and numismatic sales [457]
are still being fully exploited by the Minister of Finance.

Nevertheless, economic growth, although spectacular for a country 179
using mainly its own limited resources, is not fast enough to cater for the
demand for wage labour. While the population continues to increase at [161]
the present rate, the need for the expansion of wage labour, either on the
land or in industries, will persist.

Finally, economic expansion and industrialization is not by itself a 000
panacea for the pressures and problems besetting this tiny island Kingdom;
techniques will need to be changed, social privileges equalised, and human
resources marshalled and developed, especially in the fields of education
and vocational training. Education for white collar jobs carries greater
prestige, but efficient production of export crops may be more lucrative
for the individual.

At present, compulsory primary schooling ends at standard IV, a class 872
reached by many children at the age of ten. Intermediate and secondary 873
schooling is not compulsory, so if primary school pupils do not gain a [872]
place in one of the few secondary schools they repeat the last year in the
primary school once or even twice. Because of this an enormous percentage [874]

245 in the open plantane fields. The bread fruit and Cocoa nut trees are
[417 interspers'd with little order though chiefly near their habitations,
[244 and the other parts of the island, especially towards the sea and about the sides of the lake are coverd with trees and bushes of a most luxuriant growth, the last place having a great many mangroves & the first a vast number of the Fait'anoo trees already mentioned.
133 There seems to be no rock or stones of any kind about the island that is not coral, except in one place to the right of the sandy beach which is the highest part of it, where there is a rock twenty or thirty feet high of a calcareous stone of a yellowish colour and a very close hard texture, but even about this place are large pieces of the same coral rock that composes the shore.

648 We liv'd on the most friendly terms with the natives while we
609 remain'd here A and obtain'd a much larger supply of refreshment than could have been expected from so small a place, but it should be
[439 consider'd that all the small islands around it furnish'd their Quota,
342] and the strangers that brought their hogs and other things were oblig'd to live in temporary huts which they erected or lay them-
[136] selves down behind bushes or ferns. Besides walking frequently in the country, which we were permitted to do without any interruption, we sometimes amus'd ourselves in shooting wild ducks not unlike the Widgeon[1] which are very numerous upon the salt lake and the other
648 pool. In these excursions we found the people had often deserted their houses to come down to the trading place without entertaining any
609 suspicion that strangers rambling about would take away or destroy
439 any thing about them, but though in these cases it might be suppos'd
161 a great part of the inhabitants were sometimes collected at the beach
162 it was impossible to form any true computation of their numbers, as the continual resort of strangers from other places mixing with them might easily mislead one. However as there was never to appearance above a thousand seen at one time it would perhaps be sufficient to allow double that number for the whole island.

114 We steerd about NNW towards Kåò and Toofòá in our way to Hapaee,[2] an island which Fee'nou said was of a considerable extent,
634 where we could be supply'd plentifully with every refreshment in the
[648] easiest manner. He engag'd to go to this place with us himself and seem'd to have some interest in it, for he express'd a good deal of aversion to the Captains intention of going to Amsterdam which he
133 mention'd to him. Although they made us understand that Hapaee lay rather to the NE of Anna'mooka, we were obligd to take this route
114 because there is a cluster of islands lying between Annamooka &

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[1] *Anas superciliosa.*

[2] Ha'apai.

A [Nomuka--Analyst]

58: King G,T-5 (1777) 1967 OU9 Tonga OU9

mother; whenever we ask'd what they were, & if very superior people, 175
they woud be surpris'd at the Question, & said they were Tamaha's, a 177
distinguishing name higher than any, but what particular meaning is in 644
the word, we coud not find out. Although from their fathers country they 604
might not be intitled to power & Possesions, yet their superior rank may 565
arise from that line, as they generally admit that they are oblig'd to shew [576]
signs of respect to the Feegee chiefs, by folding their hands before their
face & bowing their bodies. Women in this Country enjoy equal Privi- 562
ledges of honour & respect with the men, for at our Observatory there were 175
two women who had homage paid to them by the Chiefs, & to one of them 602
Fattafaihe used to bow: I understood this woman to be his near relation,
she had her husband with her, who enjoyd none of these marks of honour.

'Eua

f. 86v. [13 JULY] . . . on the top of the hill is a circular place pil'd round 133
with coral stones & one or two large ones in the middle, this place they [349]
call'd Etchee[1] & said it was built as a mark of Powlohows sovereignty; [312]
there was an Excellent spring of fresh water close by it; we met in several places in the chasms of the rocks very good water & which might be conveyd down to where the Natives are, yet they do not appear to regard good water, as they in their houses always gave us indifferent & often very brackish water to drink. We were all delightd with the charming prospect from this hill; the Sea on the SE side of the Island is but at a little distance from it & the land rises in broken hills, rugg'd & cliffy, & is not capable of much improvement, but the NW part of the Island has a fine assemblage of hills & Valleys with extensive Meadows & patches of wood, with now & then a plantation; Yet this kind of Country, which we praise so much, does not answer so well the purposes of what the Natives cultivate as the flat borders by the Sea Side, so that it is in a great measure Waste; but it struck us strongly, as the best calculatd place for Cattle of all the Islands; & we thought that to make the Landscape the most charming one imaginable, woud be sheep & Cattle upon the Meadows & hills before us;
We rather hop'd than firmly believ'd, that the sheep which had been given [177]
to Marrawaggee & now put on shore here woud thrive, since the 2 Yews
were very poor & the Ram quite young, however as there are no dogs yet in this Island & as the Natives do not much admire them, they stand a chance of being unmolest'd & from that circumstance may thrive & answer the purpose for which they are left.

DESCRIPTION OF THE FRIENDLY ISLANDS

[Adm 55/116, ff. 88v–89, 89v–90, with excisions]

In regard to their numbers I know of no criterion by which to make even a 175
tolerable guess, the Natives followd us from one Island to another, there- 161
fore it is not possible to know the number of any one Island we visit'd; at 162
609

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[1] *eti.*

58: King G,T-5 (1777) 1967 OU9 Tonga OU9

[1777]

the time that their entertainments were exhibit'd there might be not short 175
of 12,000 people, who built temporary huts or slept under the trees about 161
the tent; at the Ceremony at Moa[1] we suppose not less than 600 chiefs 162
were assembled, but from these bodies I see no good conclusion to be 609
drawn of the number in either all, or any one of them. From the Nature of
the Country, requiring the labour & industry of the Natives for their 361
support, it cannot be near so populous in proportion to their size as what 311
the Society Islands are; the houses here are by no means thickly scatterd 139
about & many parts in all the Islands are uncultivat'd, owing to the 133
Sandiness & poverty of the Soil in low Islands, & in the high ones to their
elevatd & expos'd situation; besides the larger low Islands have extensive
lagoons & lakes as at Tonga & Anamooka, which considerably lessens the
surface, leaving therefore their population to be gatherd from the nature of
the Country. We will proceed to their Colour, form, & Natural dispositions.

The Friendly Islanders are of a lively brown Colour & a shade darker 142
than Omai. Although many of their principal women were fairer, their
colour resembles that of the Mallays we saw at the Cape of Good hope;
they are in general above the middle size, many very tall men & but a few
under sizd, they are firmly & compactly made about the joints, broad
shoulderd & Muscular, & perhaps few natives exceed them in that form,
which requires both strenght & agility; this is even to be observ'd in their
walking but abundantly shewn in their athletick exercises & dances: their 302
hair I believe is universally black or a dark brown when young, but they 765
have a method of colouring it which deceives one at first; it is not unusual
to see two diff^{t} colours on the same head, & perhaps one purple; a sort of 175
chalky paste which they very often daub upon their heads turns the hair a
yellow sandy colour; they are still more various in their fashion of wearing
it, being cut short on some parts & others left long, yet as they seem to
admire fine long hair, we rather suppose that when it is even partially cut,
& we know it to be the case when all short, that it is in memory of some
deceas'd friend. There are but few who have beards, but shave very 142
dextrously with 2 shells, laying one under the hair & the sharp point of the 302
one above meeting that of the one below, cuts it close off. The Chiefs have 175
glossy smooth skins preservd so by frequent washing; & as fresh water is 565
scarce, they after bathing in salt water throw over them a few coco nut 515
shells of fresh, which takes the salt which otherwise adheres to the skin, & 312
which gives a disagreeable roughness to that of the common people, &
afterwards rub over their bodies Coco nut Oile perfectly sweet & free from
any disagreeable smell. There are nevertheless many cutanious marks 175
from disorders & from voluntary inflictions; more than half of them are 164
affect'd with the tetter or ringworm, which leaves behind a whitish mark; 765
boils & blotches are often met with, & inflam'd sore Eyes are frequent; few
are free from marks on the Cheek bone, which they make by quick repeating
strokes with the knuckles on the death of their friends or relations,
besides these there are many other disfiguring marks inflict'd on the same

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[1] Mu'a.

59: Kaeppler E-5 (1964-1967) 1971 OU9 Tonga OU9

Rank in Tonga[1]

Adrienne L. Kaeppler
Bernice P. Bishop Museum

The Tongan archipelago lies in the South Pacific approximately between 131
18° and 23° south latitude and 173° and 176° west longitude, southeast of
Fiji and southwest of Samoa. The 269 square miles are divided among some
150 islands, many of which are uninhabited. The population in 1967 was more 161
than 78,000. Tongans are Polynesians, but there is a definite admixture with 144
Fijians, with whom, both traditionally and at the present time, there is
much social intercourse. Many Tongan genealogies include one or more [829]
Fijians, and these people are more highly admired than Samoans, who
are closer to Tongans in both physical type and culture. A well known [643]
example is the late Queen Sālote's half-brother, who is the son of her father,
Tupou II, and a high-ranking Fijian woman.

Tongans have their own language, derived from a proto-language which 197
seems to have been one of the first groups to appear in the differentiation
of the Polynesian language family. The Tongan language has its closest
similarities with Uvean and Niuean, and somewhat lesser ones with
Samoan and Fijian (Green 1966: 13). Highly developed in Tongan is a 576
language of respect, in which words reflect societal ranking. Thus for the 195
same meanings, when speaking to the king one uses different words from 565
those used when speaking to chiefs, and still other words are used in
speaking to commoners. Thus "go" is *hā'ele* when referring to the King, *me'a*
to chiefs, *'alu* to commoners, and *lele*, the ordinary word for "run," is used
when speaking of oneself to persons of higher rank. Integrally related to [537]
the language of respect is speechmaking. Ceremonial attendants (*matāpule*)
are the traditional speechmakers and are of necessity well versed in the
language of respect.

The most pervasive concept in Tongan culture is that of hierarchical 554
ranking. All interpersonal relationships in the island kingdom are
governed by principles of rank, and material culture and language reflect 181
this ranking.[2] The purpose of this essay is to delineate how categories of 121
people are ranked, the principles on which rank and status are based, and
the relationships between the various kinds of ranking. The focus is
ethnographic, and an attempt will be made to describe organizing principles
important to the Tongans in ordering their social relationships.

In order to understand rank within Tongan society, one must 554
conceptually distinguish social status, governing relationships within a [121]
small kin group, from societal ranking, governing relationships within the
society as a whole. Social status, which is based upon traceable consanguineal [612]

262 pineapple and papaya are eaten in season, and kava is widely grown. [241] [231] Pigs and chickens thrive and, along with fish and tinned corned beef, form the main protein in the Tongan diet.

131 Geographically and administratively the Tongan islands can be divided into three main groups (see map, Figure 2.2). Tongatapu and [133] 'Eua in the south have by far the largest land area. The central Ha'apai group consists of small coral limestone islands. Lifuka, largest of the Ha'apai group, is 4 1/4 miles long and 1 1/2 miles at its broadest place. The Vava'u group lies 60 miles northeast of [504] Ha'apai and consists of one large and several small islands. Neiafu harbor, Vava'u, is one of the best land-locked harbors in the South Pacific. In addition to these three main groups there are outlying islands to the north, including Niuafo'ou, Niuatoputapu, Tafahi, Toku, and Fonualei.

132 The temperature varies from the low 50°s to 90°, the humidity is usually very high, the mean being almost 80°. Annual rainfall is about 65 inches per year. There is usually a definite wet season from December to April and often a draught between October and December. [312] Until recently all fresh water was rainwater. Tonga is subject to [731] hurricanes and not infrequently thousands of coconut and banana trees, the basis of their cash economy, are ruined.

PEOPLE AND LANGUAGE

161 This is the geographical setting in which nearly 70,000 people play their daily social roles. The figures of the last Tongan census,

161 taken at the end of 1966, are not yet published, but it was anticipated that the number would reach 70,000. The last published figures are from 1956 (Tupouniua 1958) at which time the total population was [162] 56,838. Of this number 55,156 declared themselves to be Tongan, 277 European, 604 part European, and 801 others (mostly other Pacific Islanders).

144 Tongans are Polynesians, but there is a definite admixture with Fijian, with whom both today and traditionally, there is much social intercourse. In many genealogies there are one or more Fijians, and they are more highly admired than Samoans who are much closer to
644 Tongans in physical type. The late Queen Salote's half-brother is
582 the son of her father, Tupou II, and a Fijian woman. The social
609 system of Tonga, based on a hierarchical ranking of persons, creates a category of people with no one of equal rank to marry. In the past this was often remedied by marriage with Fijians creating a societal division called Ha'a Fale-Fisi.

197 Tongans have their own language which seems to have been the first to split from the proto-Polynesian language family. The Tongan language has its closest similarities with Uvean and Niuean and
195 broader similarities with Samoan and Fijian. Highly developed in
565 Tongan is a language of respect in which words correspond to the three societal levels. Thus when speaking to the King different words are used than when speaking to chiefs, and still different words when speaking to commoners. Thus 'go' is *hā'ele* for the King, *me'a* for

63: Urbanowicz E-4,5 (1970,1971) 1974
OU9 Tonga OU9

TONGAN ADOPTION BEFORE THE CONSTITUTION OF 1875

by

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ABSTRACT

This paper is an ethnographic reconstruction of aboriginal adoption transactions. It is based on recent (1970 and 1971) field work in the Polynesian archipelago combined with archival research on extant nineteenth century documentation. The paper deals with adoption transactions prior to 1875 since aboriginal adoption, as well as numerous other aspects of aboriginal culture, were radically altered as a result of European influence. The Tongan Constitution of 1875 is a landmark for any discussion pertaining to Tonga, for at that time various alterations were rigidly introduced into Tongan culture. 121

Introduction

The Polynesian Kingdom of Tonga is currently a Constitutional 101
Monarchy under His Majesty King Taufa'ahau Tupou IV. The territorial 131
boundaries of the island kingdom were proclaimed by King George Tupou I (a great-great-great grandfather of the present King) to be 15°S and 23°S and 173°W and 177°W (Anonymous 1887). The islands of Tonga thus fall within a rectangle of the South Pacific some 596 miles north-south by 264 miles east-west.

In approximately 1800, Goldman's most useful "terminal date" for 175
aboriginal Polynesia in general (1970: xxviii), a numerical "guesstimate" of 161
the Tongan population would probably fall within the range of fifteen to
twenty thousand individuals. The most frequently cited figure for early 175
nineteenth century Tonga is that of 18,500 recorded by the American 161
Commodore Wilkes in the year 1840, from data provided by the local 114
Wesleyan missionaries (Rabone 1845:III:29). However, as McArthur has accurately pointed out, this figure is grossly at odds with a Wesleyan guesstimate of 50,000 Tongans for the year 1847 (1967:74; *vide* Lawry

63: Urbanowicz E-4,5 (1970,1971) 1974
OU9 Tonga OU9

175 1850:245). Archival research in Australia revealed an intriguing census figure
161 for the main island of Tongatapu for the year 1824: 34,800 Tongans
114 (Beveridge 1824). Unfortunately, the good Captain had less the motivations
[162] of a preliminary census taker and more the motives of businessman *cum* sea captain trying to convince the Wesleyan Mission (with whom he had contacts and to whom the letter was written) of the tremendous "sales market" for material goods and nineteenth century Christianity in the archipelago.[1]

Aboriginal Adoption

597 Tongans had at least five distinct terms involving transactions between kinsmen which could be glossed under the one rubric "adoption" (and which have been glossed thusly in the past); these were *tauhi*, *ngaahi*, *fakahingoa*, *pusiaki*, and *ohi*. The recent research suggests, however, that *ohi* is the only term that should be termed "adoption" in aboriginal Tonga. Every time an *ohi* transaction took place there was a distinct and permanent change in (1) the rank and (2) the residence of the adopted individual. These permanent changes did not take place when the first four transactions occurred.

Rank and residence pattern are the two criteria by which adoption must be gauged in aboriginal Tonga. When a child was involved in an *ohi* transaction, that is, an adoption involving the permanent substitution of full rights of parenthood from biological parents to other individuals as parents, the adoptee had a permanent change in his (or her) rank relative to all kinsmen; the adoptee also made a permanent move into the residential area of the adopting individuals. The adopted child was treated as if he or she were actually a biological child of the adopting parents, and all important genealogical positioning was henceforth determined for the adopted individual from the adopting parents. The change in residence meant that the adopting parents were totally responsible for the welfare and up-bringing of the adopted child. Such a residential change could involve a move from one island group to another island group, or changes in residence from one village to another village (or district) on the same island.

Not-Adoption

Adoption in aboriginal Tonga will be clearer after discussing that which
597 was not adoption. *Tauhi*, or "looking after someone," was not adoption since
855 it merely referred to the process by which one individual looked after the child of another individual. Looking after someone was only a transitory transaction and did not involve any change in the rank of the individual who was thus looked after (although it could obviously imply a residential shift).[2]

597 557 613 adoption was a transaction between high ranking individuals of the various *ha'a*.

The political aspects of adoption were not lost to the European observers of nineteenth century Tonga. One individual wrote that it was the "fashion" in Tonga

> for mothers to make presents of their children to particular friends, by way of binding the ties of friendship more closely; there is a sound policy in this, as it unites the great chiefs in different districts together; for Fatua, has Tubou's daughter, and if I mistake not, Ata has Fatu or Tubou's son (Bays 1831:135).

This description indicates connections between Fatu, a non-titled *'eiki* chief of the *Ha'a Takalaua*, the titled *'eiki Ata* of the *Ha'a Ngata Motu'a*, and the *Tu'i Kanokupolu* Aleamotu'a, also known Jiosaia Tupou.[5]

[797] The Wesleyan missionary William Cross (in the archipelago from 1827 to 1833 and again from 1834 to 1835) wrote how a six year old boy, natural son of a *matapule* (a titled non-*'eiki* individual) had died in 1830. Cross wrote how the child "had become a great personage, being the adopted son of Fatu, the chief of Mua" (W. Cross *Journal* entry of October 4, 1830). This description is probably one of *ohi* since Fatu of Mu'a did have sufficient prestige and personal rank to make a child a "great personage" by means of adoption. It could, perhaps, be interpreted as being an instance of *pusiaki* but it is doubtful, since the child would have had the rank of it's own *matapule* father. Instead, the child's prestige and rank was due to his adoption by Fatu of Mu'a.

[161] [581] In aboriginal Tonga, when the population of the archipelago was considerably less than it is today, adoption transactions (along with arranged marriages) were a key part to the overall maintenance of the archipelago by the Tongan chiefs. These aspects of the political purposes of adoption were merely hinted at by Sahlins when he wrote of realignments between "corporate descent groups" which resulted from adoption (1958: pp. 157-158). Likewise, Goldman has barely pointed out the political ramifications of adoptees being introduced into the line of succession (1970:435).

597 114 Part of the problem of interpreting aboriginal adoption patterns (and numerous other aspects of aboriginal Tongan activities) are the erroneous projections into the past based solely on twentieth century field work without incorporating nineteenth century eyewitness accounts. Thus Gifford nearly described the exact aspect of Tongan transactions between kinspeople for adoption and not-adoption situations when he wrote that "adoption may vary from a truly earnest relation in which the child is taken into the bosom of the family, to mere formality" (1929:26). Unfortunately, however, Gifford was "collapsing" everything from *tauhi* to *ngaahi* to *fakahingoa* to *pusiaki* and *ohi* under the one rubric "adoption." Likewise, the Beagleholes

114 in numerous respects, are not superior to reputable eye-witness descrip-
tions of aboriginal Tonga.[1]

CONTACT AND DESCRIPTIONS

175 Part of the Tongan archipelago was first contacted by the Dutch naviga-
177 tors Schouten and Le Maire in 1616, and various contacts with Europeans
followed: 1643 (Tasman), 1767 (Wallis), 1773, 1774, and 1777 (Cook),
1781 (Maurelle), 1787 (La Perouse), 1789 (Bligh), 1793 (D'Entrecasteaux
and Labillardière), and 1793 (Malaspina) (see Colson 1885; Tudor 1968:
125–127). These contacts between Europeans and Tongans lasted for
periods of a few days to several weeks. The accounts of these men made
Europeans aware of Tonga and placed Tonga on Europe's map. The
accounts spurred Europeans to send men to proselytize the peoples of the
175 Pacific. Tonga, along with Tahiti, was one of the first island groups to be
177 sent European missionaries in the late eighteenth century.

797 The first missionaries were of the Missionary Society of London (form-

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101 [1] Tonga, named by Captain James Cook "The Friendly Islands," is composed of
some 150 to 200 islands and islets with perhaps only 25 percent of those being inhabited.
133 The islands are a form of raised limestone, or volcanic formations and limestone
formations (Anonymous 1944: 16). The most recent work indicates that the total land
131 area of the archipelago is 256.42 square miles, with the Tongatapu Group (the main
island of Tongatapu with surrounding small islands but excluding the island of 'Eua)
having 100.37 square miles of that total or some 39.1 percent (Maude 1965: 218).
● 161 Tongatapu Island is approximately 99 square miles in area. The estimated population
for the entire archipelago for December 31, 1970 was 86,055 (Tapa 1971: 4).

The territorial boundaries of the Kingdom of Tonga were proclaimed by King
101 George Tupou I to be 15°S and 23°S and 173°W and 177°W (*Tonga Government*
131 *Gazette*, 2: 55, August 24, 1887). The islands of the Kingdom thus fall within a rectangle
of the South Pacific some 596 miles North-South by 264 miles East-West, with the
outer islands of the Kingdom being Niua Fo'ou Island to the North at 15°34'S and
175°40'W, and 'Ata Island to the South at 22°20'S and 176°12'W. 'Ata Island is
approximately 100 miles southeast of the main island of Tongatapu and Niua Fo'ou
Island is approximately 232 miles northwest of the Vava'u group of Islands.

101 Tonga derived its name from the principal island of the group, Tongatapu Island or
'sacred' Tonga. The *tapu* was probably appended to the Tonga because this island
became the residence of the leaders of the archipelago. Tongatapu Island was the focal
point for the political and religious system in the archipelago prior to and after Euro-
133 pean contact. The Polynesians who settled the archipelago appear to have chosen this
relatively flat island because of terrain and climate. The middle, or Ha'apai group of
islands are a series of low islets. The northernmost island group of Vava'u has relatively
high hills, with most of the land being at least one hundred feet above sea level (as
opposed to Tongatapu Island which is no higher than two hundred feet along the
133 southern or *liku* coast). Vava'u was, and is, subject to more destructive hurricanes than
132 Tongatapu during the hurricane season and it was only on Tongatapu that relative
permanency of Tongan culture and continuity of leadership could be maintained for
182 generations.

size and its social and economic functions, Nuku'alofa cannot be 369
regarded merely as an overgrown village. The South Pacific Commission,
recognising the difficulties in defining the term "urban" in the 369
South Pacific area, proposed three characteristics typical of Pacific
urban settlements. A heavier concentration of population, an occupational 171
structure involving a larger proportion in non-agricultural
pursuits, and a form of government suited to the needs of the town.[6]
Nuku'alofa meets the first two characteristics and, by being the 369
centre of all Tongan administration, must be considered as different
from other settlements in Tonga even though it possesses no government 633
peculiar to itself.[7] As the capital of the kingdom it has several
functions different from other towns in Tonga. It is the centre of 369
administration, trade, commerce, church activities, education and
other social services, the main port and the meeting ground for old
and new, Tongan and foreign. Rural migrants form a large part of its [166]
population, its growth rate is much greater than almost all other
settlements, it is considerably larger than any other town, and its [162]
inability to meet the problem of rapid inward migration is beginning [161]
to show in ways similar to urban areas outside Tonga where the same
processes are at work. This is dramatically portrayed in a recent 369
communique:

> "The prison is full and the court overworked. On the 16th of 579
> March more than a hundred young people were involved in violent
> fighting in the streets of Nuku'alofa. Several boys received cane
> knife wounds and over thirty are being charged in a special court
> today."[8]

Thus, while conditions and attitudes appear rural, Nuku'alofa 369
must be classed, by Pacific standards, as an urban settlement. 171

urban characteristics

361

The emergence of Nuku'alofa as the future capital of Tonga can [643]
be traced from an early association with the Tu'i Kanokupolu line of
high chiefs.* Later, during the period of civil wars (1799-1845),
the previously dispersed Tongan settlements became nucleated villages
for reasons of defence.[9] Subsequently the settlement became the main [795]
centre of Wesleyan Christianity and was chosen by the victorious
Taufa'ahau (now King George I) as his permanent place of residence. [643]
It was from this time that the new village of Kolofo'ou (new town)
emerged as the settlement of the king's followers, as distinct from
the adjacent older settlement of Nuku'alofa which now assumed the name
Kolomotu'a or old town. Ma'ufanga, the third distinct area of

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* See glossary for all Tongan words used in text.

present-day Nuku'alofa, remained a separate village three miles east of these settlements until population increase brought it within the town's boundaries in recent years. Today these three settlements occupy an area of little more than two square miles on the northern side of Tonga's biggest island, Tongatapu. In 1966 the population was almost 16,000, nearly one-third of the population of Tongatapu and one-fifth of the population of the whole island group. 361 161 162

Its annual rate of population growth (6.9 per cent 1956-66) is nearly twice that of the kingdom as a whole so that today it has an estimated population of almost 18,000. It is four and a half times larger than the next largest settlement and its population density of twelve people per acre is high by Pacific standards.[10] It contains most of the kingdom's non-Tongan population but these constitute only seven per cent of its total population. In 1956, the last census to be analysed, 43 per cent of the population had been born outside Nuku'alofa (see Table I and Fig. 1). 162

Table I 162

Urban Comparisons within Tonga, 1956 161

Town Island Group	Nuku'alofa Tongatapu	Pangai-Hihifo Ha'apai	Neiafu Vava'u
Population	9202	2803	2873
Next largest town in Island Group	2560	753	1004
Median Settlement size in Island Group	262	274	232
Town's percentage of population of Island Group	29*	28	23
Percentage of Tongan population in Island Group	55*	17	22

Source: 1956 Census

* Preliminary figures released from the 1966 census indicated that these percentages had risen to 32.5 and 61.9 percent respectively.

There are difficulties in using conventional indices to classify employment in largely agricultural societies. This is true for the Tongan villager who, although more often an agriculturalist working his land for his family, will also "try his hands spasmodically at a number of other occupations that are likely to yield extra cash ... for example, the typical villager might fish occasionally for 464

7 Land shortage and population pressure in Tonga

Alaric Maude

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121 The problems of land shortage and population pressure in small
islands with only limited resources have been recurrent themes in
recent geographical research in the Pacific islands, particularly in
island Polynesia where populations are now generally increasing at
rates of between 3 and 3·5 per cent annually. This essay is concerned
with the chain of islands in western Polynesia which form the
131 Kingdom of Tonga (Fig. 7.1). The 150 islands of the Kingdom,
comprising the three main groups of Tongatapu, Ha'apai and
161 Vava'u, and a number of outlying islands, have a total land area of
only 663km^2 and support a population of about 87,000 (1970 esti-
433 mate). The Kingdom's only natural resources are the soil and the
surrounding reefs and seas, and the economy is overwhelmingly
241 agricultural, being based largely on subsistence food cropping and
the export of bananas, copra and desiccated coconut. With a limited
161 area of land, a population density in 1970 of about 185/km^2 of arable
182 land, and a projected annual population growth rate of 3·1 per cent,
Tonga faces potential problems of land shortage and population
pressure as severe as in any other nation or territory in the Pacific
Islands, with the exception of some of the atoll groups.

121 The focus of this essay is on man/land relationships, for with an essentially agricultural economy these are central to Tonga's population problem. The main objective is a search for, and examination of, possible symptoms of population pressure within the man/environment system. Particular attention is paid to land tenure, which determines how land is allocated amongst the population; the agricultural system, agriculture being by far the most important use of land; and the perception of, and reponse to, population pressure by Tongans. At a more theoretical level, the final part of the essay

67: Maude K-5 (1961) 1973 OU9 Tonga OU9

133 Kao (not shown on the map), while Vava'u is a compact and com-
paratively hilly group, its surface made up of a series of terraces.
134 The most common soil type on all these islands is a fertile, friable
soil, termed *kelefatu* by Tongans, which varies in texture from a
loamy sand to a clay. Although almost always underlain by coral
limestone, the main parent material of this soil is volcanic ash, which
gives it a mineral fertility very much higher than is usual for soils
on raised limestone islands. The other main soil type is *tou'one*, a
sandy and less fertile soil found at low elevations close to the sea.
Although present in all the islands of raised limestone formation it is
proportionately most important in Ha'apai, where it may occupy up
to half the area of some of the settled islands. It appears to be derived
entirely from coral sand or limestone and decayed vegetable matter,
with perhaps the addition of small amounts of volcanic ash and
pumice.

132 Rainfall is generally sufficient for good plant growth, with the
northern group, Vava'u, having a more humid climate than the
islands further south. Mean annual rainfall increases from 1,700mm
at Nuku'alofa (Tongatapu) to 1,780mm at Pangai (Ha'apai) and
2,180mm at Neiafu (Vava'u), while the percentage of dry months
in the rainfall record, using Mohr's definition of a dry month (Mohr,
1944, 53–8), decreases from 23 per cent and 25 per cent respectively in
132 Tongatapu and Ha'apai to 16 per cent in Vava'u. This combination
133 of fertile, volcanically-derived soils, generally adequate but not
134 excessive rainfall, and easy topography provides good conditions for
crop production throughout all the main islands of Tonga.

POPULATION DISTRIBUTION AND DENSITY

161 The total population of Tonga in the 1966 Census was 77,429
128 persons, distributed as shown in Table 7.1. In the table Tongatapu
162 and Vava'u have each been divided into two districts of contrasting
density, and in Tongatapu an attempt has been made to obtain a
realistic rural population density figure for the central and eastern
district by subtracting both the population of the main town,
Nuku'alofa, and the area of agricultural land surrounding the town
161 from the calculation. Areas of high population density are the western
162 tip of Tongatapu, and most of Ha'apai (where individual islands
have densities ranging from 121 to 410/km^2). Densities are moderate
in central and eastern Tongatapu (ranging from 96 to 159/km^2) and

67: Maude K-5 (1961) 1973 OU9 Tonga OU9

161
162 **Table 7.1** Crude population densities by districts and island groups, 1931 and 1966 (Tonga)

District or group	*Population 1966*	*Persons/km² 1931*	*Persons/km² 1966*
Nuku'alofa*	18,686		
Western Tongatapu	2,318	112	210
Central and eastern Tongatapu	26,916	31	126
'Eua	3,391	4	39
Ha'apai	10,591	122	202
Southern and eastern Vava'u	10,668	87	149
Western Vava'u	2,865	32	66
Niuatoputapu and	1,994	37	37

[128] * Includes some of the villages around Nuku'alofa whose lands cannot be separated from those of the town.

in southern and eastern Vava'u, and low in 'Eua and western Vava'u.

Two broad explanations can be offered for this pattern, one static and the other dynamic. As Table 7.1 demonstrates, the contrast between western Tongatapu and Ha'apai, and the rest of Tonga, was much more marked in the past than at present, and it can be shown to date back to at least the nineteenth century. These long-established differences in population density cannot be explained by
161 differences in land quality. Climatic and soil conditions in western
162 Tongatapu and Ha'apai appear to be similar to those in central and eastern Tongatapu, although in Ha'apai the less fertile *tou'one* soil
134 type occupies a higher percentage of the total land area than in Tongatapu. And while there may be some soil differences between western and eastern Vava'u which could help to explain the contrast in population densities there, in the absence of a soil survey there is
161 insufficient evidence with which to test this possibility.* The main

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162 * H. S. Gibbs, in a paper presented to the 1971 Pacific Science Congress in Canberra on the results of a 1967 soil survey, states that the main difference in soil types in Tongatapu is between yellowish-brown sticky clays in the eastern part of the island, and reddish-brown friable clays in the rest of the island. This pattern of soil types does not correlate with the pattern of population densities.

67: Maude K-5 (1961) 1973 OU9 Tonga OU9

161

explanation seems to lie in the relationship between settlement and 162
marine resources. In the past, fishing and reef-collecting were 361
important subsistence activities along with food cropping, although [226]
in recent years they have declined as canned meat and fish have
become more easily obtainable. Settlement therefore tended to con- [178]
centrate along the most productive shores; in Tongatapu, for
instance, over 70 per cent of the villages are located along the low
northern shore and around the lagoon, the areas considered to be
the most productive in seafoods, while in Ha'apai, which has
particularly extensive reefs and fishing grounds, only the very
smallest islands or those without *kelefatu* soils have failed to attract
settlement. Conversely, in 'Eua the surrounding reef is narrow and [133]
sometimes dangerous and the offshore waters deep and unsheltered,
and until recently the island, despite its size, had only a tiny popula-
tion. Population densities were therefore higher where shores and
reefs were productive but the land area limited, as in western
Tongatapu, Ha'apai and parts of southern and eastern Vava'u, than
where productive shores were backed by extensive areas of land, as
in central and eastern Tongatapu. The lowest population densities
were along unproductive shores, as in 'Eua, western Vava'u and
parts of the south coast of Tongatapu.

This subsistence-orientated distribution of population in the past 166
has by now been considerably modified by internal migration, which
constitutes the second broad explanation of the present population
pattern. Internal migration is largely directed towards Nuku'alofa,
the capital, central and eastern Tongatapu and 'Eua, and away from
western Tongatapu, Ha'apai, Vava'u and Niuatoputapu. It reflects [184]
movement in search of employment, education, land for cash crop-
ping, and the attractions of urban life and is a result of the growing
regional inequalities in development and opportunities within
Tonga. Further discussion of migration, however, will be left to a
later section, where it is examined in the context of the response of
Tongans to population pressure. The main effect of internal migra- 166
tion on the earlier pattern of population distribution has been to 162
reduce the contrasts between central and eastern Tongatapu and the
long standing areas of high population density, but as migration 161
appears to be continuing at a high rate further changes in population
distribution can be expected.

Having outlined the main elements of land resources and popu- 128
lation distribution we may now turn to the question of population

67: Maude K-5 (1961) 1973 OU9 Tonga OU9

Table 7.2 Land distribution: some village surveys, Tonga (*Sources:* Ha'afeva, Ha'avakatolo, Ha'akame and Niutoua, field survey by writer; 'Uiha, Koch (1955), 120—1); Nukunuku, field survey by R. G. Crocombe; Ha'ateiho, Nayacakalou (1959, 104). The figures for Ha'afeva and Niutoua are based on sample surveys.) 423 592

			Percentage distribution of households and taxpayers by area of land held (ha)					
Village	*Persons/ km²*		0 %	0·5–1·4 %	1·5–2·6 %	2·7–3·8 %	3·9–6·2 %	6·3 *and over* %
Ha'afeva	264	H	43	10	28	12	7	—
1966		T	61	8	29	2	—	—
'Uiha	186	H	9	10	41	24	13	3
1952								
Ha'avakatolo	178	H	18	9	9	27	16	21
1962		T	45	4	9	22	11	9
Ha'akame	150	H	31	—	2	49	4	14
1962		T	55	—	1	37	4	3
Nukunuku	133	H	30	—	1	61	3	
1960		T	51	—	1	44	1	3
Ha'ateiho	110	H	25	—	—	58	—	17
1957								15
Nioutoua	70	H	3	—	—	66	—	31
1962		T	18	—	—	82	—	—

H = percentage of households.
T = percentage of taxpayers.

that a household in Tonga now generally consists of a nuclear family 592 or a nuclear family plus unmarried relatives of the husband or wife, and practically every household has at least one taxpayer, some of them having two or more.

One major reason for this discrepancy between the law and reality 423 in the holding of land is the simple fact that there are now more 161 taxpayers than allotments. The total number of allotments so far marked out is about 12,140, but in 1962,* when four of the village 162 surveys were carried out, there were already about 18,400 taxpayers,

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* Based on a count of allotments on the maps of the Lands and Survey Department, with every two blocks of less than 1·6 ha being combined to form one holding, as has been the practice in Ha'apai where many men have their holding split into two sections on different soil types. [127]

423 and the 1966 Census enumerated 20,003 males aged 16 and over.
161 A second reason is the uneven distribution of population discussed
in the previous section. In areas where population densities are about
162 180/km² and over (i.e. 0·56ha or less, per person, of all land), most
holdings have for many years been less than 3ha; when cadastral
surveys were first carried out in these areas the population density
was already such that holdings were generally about 1 to 2·5ha, and
any attempt to stick to the statutory size of allotments would have
423 led to the dispossession of many landholders. Despite the small size
of the holdings there are still many more men entitled to land than
there are allotments, and the typical pattern of land distribution in
these areas is shown in the figures for Ha'afeva and 'Uiha (Ha'apai)
and Ha'avakatolo (Tongatapu) in Table 7.2. In Ha'afeva the high
level of landlessness is partly a result of the fact that nearly half the
persons who held land on the island in 1966 lived elsewhere in
Tonga, and this phenomenon of a large number of absentee landholders
is common to many islands in Ha'apai. In areas of moderate
population density (around 100 to 150/km²) the pattern of land
distribution is as shown in the date for Ha'akame, Nukunuku and
Ha'ateiho in central Tongatapu. On these estates almost all allotments
are of 3·2ha and consequently a larger proportion of taxpayers
and households are generally without land than is the case in villages
with higher population densities. Where population density falls to
about 80/km² or less the pattern of land distribution is represented
by the figures for Niutoua in eastern Tongatapu, where in 1962 only
3 per cent of the households had no land. Landlessness on this
Government estate would have been even less had it not been for
the fact that one-third of the registered allotments on the estate were
held by people who lived in other settlements, mostly either in
nearby villages or in Nuku'alofa, a not uncommon feature of
Government estates in eastern Tongatapu.

These data on the percentage of households are by themselves of
only limited value in an assessment of population pressure. The fact
that a man does not hold land, or has only a small allotment, does
not necessarily mean that he does not have satisfactory access to
423 land for food production and cash cropping. The borrowing of land
427 from relatives, friends, villagers and estate-holders is common
throughout Tonga, and has its basis in the customary, although now
178 weakened, obligations that exist between kinsmen, friends and a
[241] chief and his people. It is fairly easy to borrow land for growing

from one to ten or more years, depending on population density. 241
Of the two main cash crops bananas are often incorporated into this 241
bush fallow system, being planted as part of the cropping sequence 245
and yielding for only a couple of years before the land returns to
bush; but during the last few years they have increasingly been
grown in separate plantations, and chemical fertilizers are now being
used both to improve yields and to extend the life of the plot. The
other main cash crop, coconuts, is unevenly scattered over all or
part of each allotment, with the food-crop gardens being rotated
amongst them. The effect of population density on this system will 121
be examined from two perspectives, the ecological and the economic.

An ecological assessment

In Ha'apai, where the agricultural system is under the greatest 241
pressure from high population density, the cropping period is now 182
usually from three to five years, compared with the two or three
years common elsewhere, while the fallow period is generally from
only one to three or four years compared with three to five years
elsewhere. Many farmers in Ha'apai are using shorter fallows than
when they began farming, a common change reported amongst older
men being a reduction to half the earlier fallow length. The food-crop
pattern has also changed with the increase in population density.
In areas of high density, cassava has become the staple food crop [244]
while yams, the most preferred tuber for eating, are now much less
frequently grown. Cassava gives good yields even on heavily-cropped
soils and does not require a lengthy fallow, and also yields more per
man-hour of labour than the other food crops.

The response of Tongan farmers to population growth has therefore been to reduce fallow periods, lengthen cropping periods and
alter the food-crop pattern, and these changes are most pronounced
in Ha'apai. There the agricultural system is now fairly intensive by [161]
the standards of shifting cultivation, with a cropping period/fallow
period ratio of around 1 : 1, and supports population densities of up
to about 280/km^2 (cf. Nye and Greenland, 1960, 128). Yet despite
the probable doubling in the intensity of cropping over the last 30
to 40 years there has been no change in the bush fallow technique of
maintaining soil fertility, and one might therefore expect to find
symptoms of ecological stress within the system.

An examination of possible areas of stress, however, suggests the
existence of as yet only minor problems. There has been some [137]

67: Maude K-5 (1961) 1973 OU9 Tonga OU9

on the other hand, suggests that cash-crop incomes tend to be lower 511
in areas of high population density than elsewhere. Data for banana 182
production in rural Tongatapu in 1966, for instance, shows that 433
while there was no relationship between population density and *per capita* production when densities were less than 200/km², in the one area of higher population density production per head fell to 55 per cent of the mean, suggesting that at this level of density land becomes
a more important limiting factor in production than labour. A 511
similar analysis of *per capita* copra income within Ha'apai in 1956 182
(Table 7.4) again suggests some inverse relationship between population density and income per head, but the trend shown is not uniform and the co-efficient of correlation between the two variables 511
is only −0·36. For Tongatapu this type of analysis is not possible, 182
as the variables determining the level of copra production are not sufficiently uniform throughout the island, but data from the household survey for three villages which are comparable show a clear inverse relationship between *per capita* income and population density (Table 7.5).

Table 7.4 Population density and *per capita* copra income, Ha'apai, 1956 (*Source:* Records of the Tonga Copra Board) 511 182 161

Persons/km²	*Copra income* per capita ($A)
80–149	58·4
150–229	51·2
230–309	39·6
310–379	45·0

Table 7.5 Population density and *per capita* copra income, three Tongatapu villages. 1961 (*Source:* Records of the Tonga Copra Board) 511 182 161

Village	*Persons/km²*	*Copra income* per capita ($A)
Niutoua	70	37·4
Ha'akame	150	29·2
Ha'avakatolo	178	22·0

67: Maude K-5 (1961) 1973 OU9 Tonga OU9

shift in food crops, but the use of fertilizers, which represents a basic 182
innovation in the system, is largely confined to cash cropping in 241
Tongatapu and has not been adopted by farmers in more intensively
cultivated Ha'apai. Very few farmers see any need to change their
traditional techniques.

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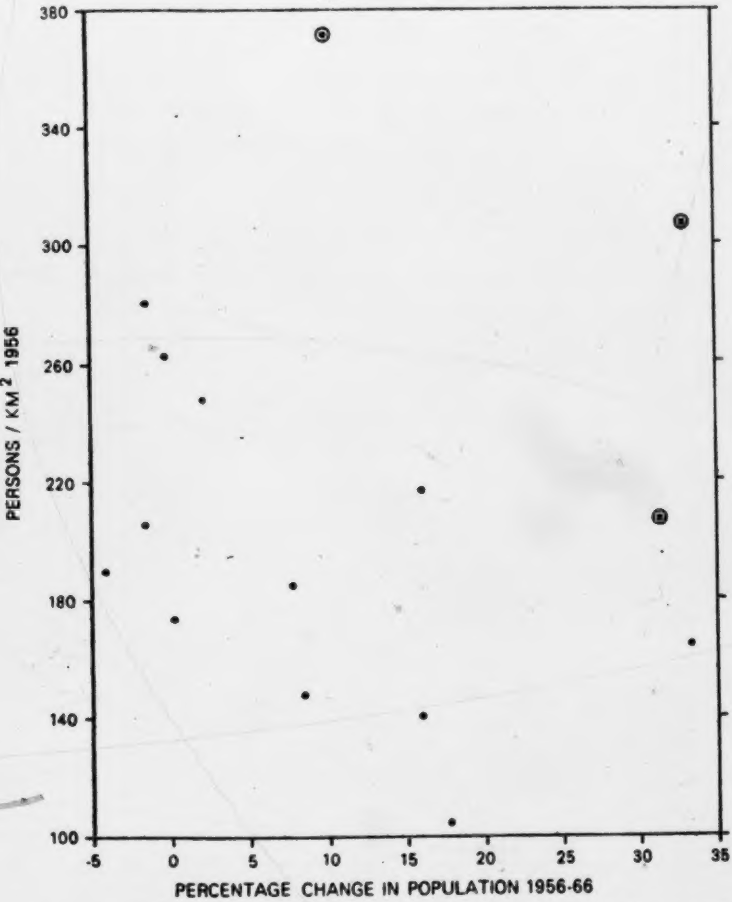

Fig. 7.2 Tonga: scatter diagram showing the relationship of population growth in 1956–66 to the 1956 population density

166 The pattern of internal migration, however, shows more sensitive
182 response to population pressure, particularly in Ha’apai. The basic
reason for migration in Tonga is the lack of opportunities to earn
166 money in the outer islands as compared with Tongatapu, but the
182 influence of land shortage is indicated by the fact that, within
161 Ha’apai, population growth between 1956 and 1966 in each island
162 tended to be inversely proportional to the 1956 population density
[311] (Fig. 7.2). The three islands which lie furthest from the general trend
(circled in Fig. 7.2) all have residents who utilize land on the nearby
high island of Tofua, and their effective population densities are
182 therefore lower than those shown. It may be hypothesized that the
higher the population density the harder it is for men, particularly
511 those without their own allotments, to achieve a satisfactory cash-
245 crop income, and in Ha’apai this problem is made greater by the
464 fact that until recently cash cropping was largely restricted to
coconuts, while opportunities for wage employment in the group
166 have always been very limited. Of 20 cases of migration collected in
Holopeka (Ha’apai), for instance, 18 were men without allotments,
182 and 11 of these had left their village at least partly in the hope of
obtaining land. That landlessness is not the only reason for migra-
tion, however, is shown in the fact noted earlier that those who had
left Ha’afeva (Ha’apai) in 1966 included nearly half the men who
[731] already held land on the island. Employment following education
on the main island, dissatisfaction with village life, a desire to take
advantage of the better opportunities to earn money in Tongatapu
or to ensure a better education for one’s children are all important
reasons for movement, while in Vava’u the damage caused to the
economy by the 1961 hurricane seems to have been the major
determinant of migration from that group in the early 1960s.
Nevertheless, the pattern of migration from Ha’apai outlined earlier
does demonstrate the significance of land shortage as a factor, and
suggests that population pressure is sufficiently felt by many Tongans
to stimulate them to leave their home village.

CONCLUSION

121 In the preceding sections we have examined a number of facets of
182 the man/land system in Tonga. Symptoms of stress or pressure were
found in land problems, the fallow vegetation, the nutrient status of
the soil, cash-crop incomes and internal migration, and these point

[190 cont.]

101 and have the same social and mercantile disposition. All these then
175 might be added to the Friendly Islands. They are in general remarkably well inhabited, particularly those which we visited. Tonga-Tabboo is almost one continual garden, and Ea-oowe, Namoka, and the adjacent islands, are some of the most fertile spots in the Pacific Ocean.
161 We shall therefore be extremely moderate in our calculation, if we
175 suppose the number of inhabitants in all these islands does not exceed
182 200,000 persons. Their healthy climate, and its excellent productions,
164 keep them free from those numerous diseases, to which we fall an easy
175 prey, and, according to their plain and simple notions, satisfy all
517 their wants. Their progress in the arts, beyond other nations in the
53 South Sea, and particularly their refinement in music, serve to pass
175 away their time agreeably, and give them taste to acknowledge and discern the beauties of their own exquisite forms, from whence one
181 of the strongest ties of society is derived. Their general turn is
609 active and industrious, but their behaviour to strangers more polite
175
[499] than cordial. Their peculiar propensity to trade seems to have substituted this insincere civility, in the room of real friendship, from
171 those interested and mercenary principles which commerce inspires. Both
175 [191] these characters are in direct opposition to those of the Taheitians,
[181] who delight in an indolent life, and are too hearty in their affections
[517] to confine them to outward shew and specious appearances. However there are many luxurious individuals (arreoys) at the Society Islands, whose moral character appears to be somewhat depraved; whilst the people of the Friendly Islands seem to be ignorant of vices, which can only have arisen from a superior degree of opulence.

122 The canoes which accompanied us from Namoka returned at noon

132 on February 16, 1970 to a nighttime low of 55.8° F. on July 17, 1970 (Tu'ipelehake 1970: 2).

Government and Political Organization

642 In June 1970, the Kingdom of Tonga emerged from status as a British Protectorate to a fully independent nation. Today the national government of Tonga takes the form of a constitutional monarchy. Tonga has
646 177 parliamentary institutions which appear to be based on a Western govern-
178 ment model, but examination of content rather than form reveals Tongan principles at work.

> The Legislative Assembly is unicameral and consists of Privy Councillors, Cabinet Ministers, Representatives of the Nobles and Representatives of the People. Eleven councillors or ministers-all but two of whom are nobles, together with a further seven Noble's representatives, represent the traditional foci of leadership. They are theoretically counterbalanced by seven representatives of the people, many of whom in fact have been elected because of qualities important in traditional Tonga. The system bears superficial resemblance to its English model: it is western in its legal form, Tongan in its benevolent but autocratic practice (Walsh 1967: 120-121).

632 Nuku'alofa, the major port, is the seat of government and the cen-
[504] ter of economic, social, and religious life of the Kingdom. Nuku'alofa
[368] is also the location of most secondary schools and has the largest and
[162] best hospital in the islands. With a population of 15,685, 21 percent
of the Tongan population resides in Nuku'alofa. Between 1956 and 1966
[161] the town showed an increase in population of 70 percent (Fiefia 1968: 11).
[179] Nuku'alofa is beginning to experience the problems of rapid population
growth and the attendant phenomena of unemployment, crime, and the in-
abilities to handle new demands on government services. Walsh (1969:

Land Tenure

423
421 The present system of land distribution reflects what has been called "overlapping stewardship" and is characteristic of many ethnographic Polynesian societies (Sahlins 1958: 6-8). In Tonga the crown owns all land; it is then divided into hereditary estates (tofi'a) held by nobles as primary tenants. The estates are divided into bush allotments ('api tukuhau) and town allotments ('api kolo) and commoners hold these as final tenants. Legally all male taxpayers enjoy the right to one allotment of each type, but in fact a large number of men have no registered allotments. The 1966 Census shows that 57.8 percent of the males over fifteen years of age were without land (Fiefia 1968: 30). The fact that there is insufficient land for all males to have an allotment of 8-$^{1}/4$ acres will mean that as population increases the number of landless will increase. [426] At present most peasants have access to land not through their legal rights but through sharing land with kinsmen or friends who have been able to obtain their allotments.

Tongan Society

● 161 Tonga's population in 1970 was estimated to be 87,406 (Tu'ipelehake 1970: 10). [162] This population is relatively homogeneous with less than 1 percent of the population being of nationalities other than Tongan. 563 These non-Tongan components consist primarily of Europeans from throughout the British Commonwealth who are in the Kingdom as administrators and teachers, and a small population of Indians who are occupied in the commercial sector.

368 Besides dwellings and the attendant secondary buildings, Puke has
366 a church, a town building, a kindergarten, a clinic and a store. All
except the last are grouped on a small piece of land donated by the
noble for community purposes. The store is located next to the house
of the store owner.

491 An unsurfaced road connects the village with the main road and
494 buses traveling the main road are usually the only form of motor trans-
365 port used by the villagers. A power line runs beside the main road but
no feeder line has been extended to Puke and there is no other source
312 of electrical power. The major sources of water are rain catchment and
storage in brick and cement cisterns. There are also a few hand-dug
wells from which water is obtained by rope and bucket.

Village Demography

162 Village population in 1971 was 261 persons living in 42 households.
[592] Table 5[A] describes the population by age and sex. The population has
(166) grown considerably since 1955 due largely to migration from more remote
● [161] islands of Tonga (See Table 6[B] for origin of household heads and Table 7[C]
369 for crude growth rates). Puke, being close to Nuku'alofa, has experi-
166 enced the effects of rural-to-urban migration in the archipelago (See
Walsh 1969: 95-98). Recent immigrants have come to Puke because it pro-
vides easy access to services centered in Nuku'alofa not available in
most of the more rural locales. Opportunity for education and better
health care are frequently given as reasons for wishing to live close
166 to Nuku'alofa. Informants also mention the greater availability of

A, B, C [See pp. 27-29 respectively--Analyst]

[TEXT CONTINUED ON PAGE 30]

TABLE 7

Population Growth of Puke Village

161
162
592

Year	Number of Households	Number of Persons	$\bar{X}$ Persons per Households
1956*	19	91	4.8
1966**	30	198	6.6
1971***	42	261	6.2

* From 1956 Government Census
** From 1966 Government Census
*** From January 1971 census by author

131 and 175°40'W, and 'Ata Island to the South at 22°20'S and 176°12'W. 'Ata Island is approximately 100 miles southeast of the main island of Tongatapu and Niua Fo'ou Island is approximately 232 miles northwest of the Vava'u group of islands.

133 The Kingdom of Tonga consists of some 150 to 200 islands and islets, with perhaps only 25% of these being inhabited. The islands are a form of raised limestone, or volcanic in origin, or a combination of marine volcanic formations and limestone formations (Anonymous 1944: 131 16). The most recent work indicates that the total land area of the Kingdom is 256.42 square miles, with the Tongatapu Group (the main island of Tongatapu with surrounding small islands but excluding the island of 'Eua) having 100.37 square miles of that total or some 39.1% (Vide Maude 1965: 218). Tongatapu Island is approximately 99 square 161 miles in area. The estimated population for the entire Kingdom for December 31, 1970 was 86,055 (Tapa 1971: 4).

European Contact

175 Part of the Tongan archipelago was first contacted by the Dutch 177 navigators Schouten and Le Maire in 1616, and various contacts with Europeans followed: 1643 (Tasman), 1767 (Wallis), 1773, 1774 and 1777 (Cook), 1781 (Maurelle), 1787 (La Perouse), 1789 (Bligh), 1792 (Edwards), 1792 (Bligh), 1793 (D'Entrecasteaux and Labillardiere), and 1793 (Malaspina) (Vide Colson 1885: 257ff.; Tudor 1968: 125-127). These contacts between Europeans and Tongans were sporadic and lasted for periods of a few days to a few weeks. The accounts written by these

FOOTNOTES

Notes for Chapter I

161 [1] A numerical estimate of the indigenous Tongan population for
the year 1800 would fall within the range of fifteen to twenty thou-
sand. The most frequently cited figure is that of 18,500 recorded by
Wilkes in 1840 from the Wesleyan missionaries (1845, III: 29), but
this is greatly at odds with a Wesleyan estimate of 50,000 for 1847
162 (Lawry 1850: 245; Vide McArthur 1967: 73). An intriguing population
total for Tongatapu alone was made by an Australian sea captain in
1824: he placed the population of the main island at 34,800 (Beveridge
114 1824 Letter). Unfortunately, I believe the captain had less than the
goals of a preliminary census taker at heart but more the eye of a
businessman cum sea captain who was trying to convince the Wesleyan
missionaries at Sydney, Australia, with whom he was acquainted, of the
tremendous potential sales market for material goods and Christianity
in the archipelago.

797 [2] This list is based on Minns (1930; 1933). Missionaries who only
passed through the archipelago are not included in this list. This in-
cludes Hazlewood, who was in Tonga in 1844 and Thompson who was in
127 Tonga in 1850. A comparison of the list with the manuscript biblio-
graphy of this work will partially indicate the number of manuscript
material which have survived into this Century. Many of these Wesleyan
[113] missionaries had letters in the Mitchell Library microfilm series
FM4/1417 to FM4/1421. These letters were read in the course of the
research but unless they were specifically cited in this presentation,
these individual letters do not appear in this bibliography.

121 [3] The Swanton volume is an excellent example of ethnohistory contributing to ethnographic reconstruction (Bushnell) and culture history (Fenton).

[4] The historical aspect of Pacific culture was given impetus by the establishment in 1950 of the Department of Pacific History at the Australian National University, Canberra, Australia. Maude wrote that "the historical study of the Pacific Islands could be said to have commenced as an organized specialization within the general discipline of history" in 1950 (Maude 1968: xv). Even though "Pacific History" as an organized discipline began the movement to archival sources, the interests of Pacific historians have not necessarily coincided with the interests of ethnohistorians; and even though Pacific historians have done extensive archival research, their published works do not delineate the historical method which they applied to their sources.

Laportea harveyi, Rhus taitensis, Alphitonia zizyphoides, Dysoxylum spp., 137
and other trees may reach considerable size. Tongatapu and 'Eua are the only [101]
permanently inhabited islands of the Tongatapu group.

The central, or Ha'apai, group is about 90 miles from Tongatapu. It includes 131
the main islands of Lifuka, the former capital and site of the Chief's 101
Palace; Nomuka; Kao; Tofua; and a large number of smaller islands, many
of which now support no permanent inhabitants.

Vava'u, the largest and principal island of the Vava'u group, has an area 133
of approximately 35 square miles and reaches an altitude of about 150 meters
along the precipitous northern coast. Its surface is uneven and the southern, [504]
very irregularly and deeply indented coastline provides a beautiful and completely [361]
land-locked harbor, where the principal town of Neiafu is situated. At
the northwestern part of the island is a lake of brackish water and nearby is a
rather large swamp of marshy area unique in the islands. Another, a large
central lake connected at one point with the sea during high water, is found
on the island of Nomuka in the Ha'apai group. Large crater lakes also occur
on Tofua and on Niuafo'ou. Ocean-going steamers are able to dock at Neiafu 504
in Vava'u and at Nuku'alofa on Tongatapu. Cutters and interisland boats can
reach a jetty at the village of Pangai on Lifuka Island in the Ha'apai group,
and it is possible for very small boats to make a landing at a makeshift dock
on 'Eua. And it is usually possible, in moderate seas, to get ashore from
canoes or other small boats on the other low coral islands. It is much more 504
difficult, however, to land on the volcanic islands of Tofua, Kao, Late, Niuafo'ou, 133
or Tafahi where most of the coast is steep and abrupt and where protecting
reefs are lacking or do not break the often strong wave action. These
islands can be reached only by canoe or small boat and under most favorable
weather conditions, or by swimming from larger boats which must stand well
off shore for safety.

The population of Tonga is nearly 50,000. It is heavily concentrated on 161
the islands of 'Eua, Tongatapu, Nomuka, Lifuka, and Vava'u and some of the 162
smaller adjacent islands. The volcanic islands of 'Ata, Tofua, Kao, Late, and
Niuafo'ou have few or no permanent inhabitants at the present time. The [731]
former population of about 1,300 on Niuafo'ou was evacuated after the disastrous [166]
volcanic eruption in 1946, and at present makes up a large part of the
population on 'Eua. (See figure 2.)

The more heavily populated islands show a high percentage of land utilization, 137
the indigenous plant species surviving only in occasional uncultivatable [311]
areas, usually near the sea. Everywhere grows a number of species of greater
or lesser usefulness presumably brought to the islands by the aborigines as
they arrived in Tonga from other islands. These species predominantly show
Asiatic, African, or Malaysian origin. A possible exception is the sweet potato,
and there is considerable question as to how it reached Polynesia. In this group
one may include that most useful of all plants for island peoples, the coconut.

121 that with the passing of one more generation
little of this knowledge will survive in
Polynesia.

It is for this purpose—to record the uses
[101] of plants in folk-medicine—that I went to
Tonga during the months of September
through November, 1969.

The literature on diverse native floras and
the medical uses of each plant is voluminous.
The flora of Tonga, however, has never been
114 surveyed for this specific purpose. Strict
botanical investigation on the islands began
with Banks and Solander, who accompanied
Captain Cook on his first voyage in 1769
(11). There have been numerous other
collectors in the archipelago, and four comprehensive
reports of the flora of Tonga
have since been completed (32, 10, 4, 11).
127 *Plants of Tonga*, by T. G. Yuncker (32),
stands as the basic reference upon which
114 this survey was based. Yuncker's carefully
recorded list of native names was especially
valuable.

The results of several ethnological and
other first-person accounts have been utilized
114 in this paper (7, 17, 15). Although several
interesting anthropological studies are recorded,
information regarding Tongan medical
practices is scarce.

121 Although it would be interesting to decipher
slowly the conceptual structures underlying
the mechanics of medical treatment in
Tonga, I have attempted only to describe
the techniques and practices that are still
employed. It has become a question of
salvaging the knowledge still remaining
before it becomes too late to learn *anything*
about traditional Tongan medicine.

101 The Tonga Archipelago is situated in the
South Pacific Ocean between 15° and 23°
South Latitude and 173° and 177° West
Longitude. The islands are clustered in
three main areas. The northern, central, and
southern groups are known as the Vava'u,
Ha'api, and Tongatapu groups, respectively.
Scattered over 20,000 square miles of ocean,
the land area of the more than 150 islands
is about 269 square miles. Only 36 of these
[161] islands are inhabited, with a total population
of 77,585 individuals (1966 census). More
101 than 48,000 are living in the Tongatapu
162 group. Tongatapu Island is the largest in
this group, with an area of almost 100

[p. 424-A]

1 *Traditional Polity in Tonga*

Near the centre of the 70,000,000 square miles of the Pacific 131
Ocean lies the smallest kingdom in the world, Tonga. Situated
1,100 miles north-east of New Zealand and 420 miles south-east
of Fiji, it consists of more than 150 small islands which are
scattered between 15° and 23° south latitude and 173° and 177°
west longitude. The kingdom is divided into three main island
groups, Tongatapu to the south, Ha'apai in the centre, and Vava'u
to the north. The total area of the whole group is 269 square [361]
miles, though only thirty-six of the islands are inhabited by the
population which numbered about 90,000 in 1972, 97.5 per cent [161]
of whom are native and belong to the Polynesian race. Using [162]
oral traditions, particularly genealogies, ethnohistorians have concluded
that the ancestors of the present inhabitants of Tonga 714
arrived at the group from Samoa in A.D.950 (Gifford 1929:50;
Wood 1932:6). However, recent archaeological and linguistic
evidence suggests that Tonga has been occupied for a much
longer period and was settled probably from the north-west rather
than from Samoa (see Green 1966:6-38: Groube 1971:278-316).

Long before the coming of the Wesleyan missionaries to Tonga 642
there was a highly organised socio-political system somewhat
similar to that found in other Polynesian societies, based on the
rule of the chiefs. However, Tonga was unique in Polynesia, and 643
in the Pacific as a whole, in that it had a traditional monarchical
system under the headship of the Tu'i Tonga. In fact, the institution
of Tu'i Tonga had developed through the years into something
similar to the Dalai Lama of Tibet and the Mikado of
Japan.

Originally, the whole of Tonga was under the sovereignty of [173]
the Tu'i Tonga. The first Tu'i Tonga, 'Aho'eitu, who began his
rule in Tonga in about A.D.950, was believed to be the son of
Tangaloa, the god of the sky, and an earthly mother (Gifford
1924:25, 38; Wood 1932:5) thereby encompassing in his person

6

Tonga[1]

EQUALITY OVERTAKING PRIVILEGE

ALARIC MAUDE

423 THE SYSTEM of land tenure which has existed in the Kingdom of Tonga since the late nineteenth century differs in many 641 respects from those of other parts of the South Pacific, its two most distinctive features being that land rights are granted solely to individuals, and that every taxpayer (that is, every male Tongan aged sixteen years and over) is entitled to eight and one-quarter acres of agricultural land and a small town allotment 121 on which to build his house. These features, and others described below, raise a number of questions. Does the present system differ significantly from that of the pre-contact past? How effective is it in practice, and does it provide a sound basis for agricultural development? Are tenure changes necessary to cope with the present rapid population growth? This chapter attempts to answer these questions.

131 The 150 islands of Tonga are scattered over 450 miles of ocean [161] in Western Polynesia. With a total land area of only 256 square miles they support a population of about 80,000 persons. The 133 Kingdom's only natural resources are the soil and the surrounding [433] reefs and seas, and the economy is overwhelmingly agricultural. Over ninety per cent of Tongans live in the three main [361] groups of Tongatapu, Ha'apai and Vava'u, where the islands are of raised limestone formation. The surface of Tongatapu is flat or very gently undulating and as in all the islands of this type there are no permanent streams. The islands of Ha'apai are small, low and scattered, while those of Vava'u are higher 134 and have a terraced appearance. About eighty-five per cent of the total land area of the raised limestone islands is suitable for cultivation, and the soils, being largely derived from volcanic ash, are very fertile. The main soil type of these islands is a

If there is no widow the land passes to the deceased holder's 423
eldest son, or if he is also dead to his eldest son, and if there is 428
no male heir through the eldest son then the land passes to the
next eldest son or his male heir and so on. If there is no heir [562]
through the sons an unmarried daughter may hold the land for
life, or until she marries or is proved in the Land Court to have
committed fornication. Several unmarried daughters may hold
jointly. If there are no daughters the succession passes to the
deceased holder's brothers and their sons, or failing these, to the
brothers of the deceased holder's father and their male heirs. No
person may inherit land if he already holds an allotment of the
same kind as that to which he is entitled as heir, but where the
heir is a son or grandson of the deceased holder and already has
land he may choose between his own allotment and the inherited
allotment. Should there be no heirs the land reverts to the estate-
holder or the government, depending on the type of estate. Only [848]
legitimate sons may inherit, and only in very rare cases is an
allotment divided between two heirs. These rules of inheritance [183]
do not necessarily follow Tongan custom exactly. For instance,
succession to an allotment cannot now be traced through a
female, and the son of a daughter of a deceased holder has no
claim to the land of his mother's father, although succession to
an hereditary estate can be claimed through females. In practice,
however, where there are no heirs through males the Minister
and estate-holders usually allocate the land to the nearest other
relative. A study of land acquisition in two villages showed that
in one an allotment had passed from a widow to her brother's
son, there being no claimant from her husband's family, while
in the other, six of the forty-eight landholders interviewed had
gained their allotments from their mothers' relatives.

With large families common it is obvious that many men will 423
not be able to inherit land, and for them the only way of obtain- 425
ing an allotment is to acquire one that is vacant. This has not
been easy, however, over the last two or more decades. In the 423
more densely populated parts of Tonga all allotments have been
occupied for some time, while in other districts the survey and 161
subdivision of the land has not kept pace with the growing
number of taxpayers. Up till 1957 only 2,564 eight-and-a-quarter- [162]
acre allotments had been marked out, although there were then
about 12,000 taxpayers, and in the less densely settled areas
where allotments should have been available much of the land
remained in customary holdings of about ten to thirty acres
(similar to those shown in the 1910 map for Niutoua in Figure
1). A

A [See Category 423, p. 109--Analyst.]

80: Maude K-5 (1961) 1971 OU9 Tonga OU9

a quarter acres of land. In most villages a large proportion of households and taxpayers had no land at all, and in some a number of taxpayers held more than eight acres. The pattern of land distribution also varied from village to village. 423 592

Table 1: Some Examples of Land Distribution

423 592 162

Village		Percentage distribution of households and taxpayers by acreage of land held* 0	1-3	4-6	7-9	10-12	13-15	16-18	19 and over
Ha'avakatolo	H†	18	9	9	27	16	–	6	15
1962	T‡	45	4	9	22	7	4	5	4
Ha'akame	H	31	–	2	49	2	2	7	7
1962	T	55	–	1	37	3	1	–	3
Nukunuku	H	30	–	1	51	2	1	14	1
1960	T	51	–	1	44	1	–	3	–
Vaini	H	36	–	–	32	–	–	11	21
1962	T	41	–	–	29	–	–	3	7
Niutoua	H	3	–	–	66	–	–	31	–
1962	T	18	–	–	82	–	–	–	–
Ha'ateiho 1957	H	25	–	–	58	–	–	10	7
'Uiha 1952	H	9	10	41	24	9	4	2	1
Ha'afeva	H	43	10	28	12	7	–	–	–
1966	T	61	8	29	2	–	–	–	–

* to the nearest acre
† percentage of households
‡ percentage of taxpayers
Sources: Ha'avakatolo, Ha'akame, Vaini, Niutoua and Ha'afeva, field survey by writer; Nukunuku, field survey by R. G. Crocombe; Ha'ateiho, Nayacakalou 1959:104; 'Uiha, Koch 1955:120-1. The figures for Vaini, Niutoua and Ha'afeva are based on sample surveys.

The major reasons for these variations in land distribution and for the lack of correspondence between law and practice in the holding of land are the uneven distribution of population (an unevenness which does not correspond to variations in agricultural productivity), the incomplete subdivision and allocation of allotments discussed above, and the fact that there are now more taxpayers than allotments, a problem which will be discussed below. 423 182

In areas where population densities are about 500 persons per square mile and over (as in western Tongatapu, around Nuku'alofa, in most of Ha'apai and in south-eastern Vava'u) most holdings have for some time been less than eight acres, and even so there are many more men entitled to land than there are allotments for them to hold. In these districts no attempt [161]

In areas of more moderate population density (about 300-400 423
persons per square mile) the pattern of land distribution on 182
estates which have been fully subdivided is shown in the figures
for Ha'akame, Nukunuku and Ha'ateiho.[A] Here most households [161]
have either eight acres or no land at all, although in Ha'akame
several taxpayers hold twelve-acre allotments and a block of
thirty-three acres is held as a lease by the only man of rank in
the village. Where the population density falls to about 200 [161]
persons per square mile or less the pattern on subdivided estates
is represented by the figures for Niutoua in eastern Tongatapu
(see Table 1 and Figure 1),[A] where only three per cent of the
households in 1962 were without land. Yet even there about
eighteen per cent of the taxpayers had no land, because one-third
of the registered allotments on the estate were held by people
who lived in other settlements, mostly either in Nuku'alofa or
in other villages in eastern Tongatapu. Where subdivision and
allocation of allotments is not complete the proportion of taxpayers
and households without land is very much higher, as is
shown in the figures for Vaini in central Tongatapu, where in
1962 about one-half of the estate was still in customary holdings.
The recent allocation of allotments has significantly altered the
pattern of land distribution on this estate, but has had little or
no effect on the other villages discussed above.

The significance of this unequal distribution of land between 423
individuals and households needs to be carefully assessed, for 425
the borrowing of land from relatives, friends or estate-holders is
common. It is fairly easy to obtain the use of land for growing [241]
short-term and largely subsistence food crops, even in densely
settled areas, although many men claim that it has become more
difficult in recent years. Where land is borrowed from a relative [427]
often no direct return is made, but when borrowing from others [602]
it is customary to give part of the crop, such as a basket of yams,
to the landholder.

Obtaining the use of land for cash cropping is more difficult, 423
and although it would be hard to find a family short of food 425
simply because it could not borrow enough land for gardening,
households without land tend to have significantly lower cash 241
incomes than households with land. Borrowing for cash cropping (434)
particularly has become more difficult over the last two years, [178]
for with the improved market for bananas landholders have
expanded their own plantings and are less willing to lend their
land to others, especially for more than one or two years. In 423
Tongatapu today it is not unusual to find people having to pay 427
for the use of land for cash cropping, although renting without 241

[A] [See Category 423, pp. 109, 117--Analyst.]

treat kava as if it were strong stuff. And so it is, but the strength 276
comes from society, not from the vegetable kingdom.[3]

Before I describe the ceremony, here are a few background
facts about the Kingdom. Tonga is a Polynesian society consisting 105
of about 150 small islands with a population of about [161]
70,000 people. It has a Treaty of Friendship with Great [648]
Britain, but has always been independent, never a colony, a
fact of which Tongans are very proud. The people have been [779]
Christian for 130 years and virtually everyone can read and [212]
write. Tongans practise subsistence farming on small holdings, [241]
with coconuts and bananas as the main cash crops. There are [434]
no extremes of wealth or poverty. For the past 100 years [642]
government has assumed the form of a constitutional monarchy.
Anyone who saw Queen Sālote of Tonga at the coronation
of Queen Elizabeth in 1953 will not be likely to forget
her. She is as memorable in Tonga as she is in Britain. She died [643]
in December 1965 and was succeeded by her eldest son, the
present King Taufa'ahau Tupou IV.

DESCRIPTION OF THE CEREMONY

The basic form of the kava ceremony is always the same, though 276
it may vary from a small informal gathering of four or five 574
people to a huge assemblage of several hundred people. It can be dressed up or down as the occasion requires. It takes place on many different sorts of occasion: when men visit each other just to talk; when welcoming home relatives who have been away; in courtship; at weddings; at certain points in a funeral; at the appointment of a king and later on at his coronation; and similarly at the appointment of a chief and on the occasion when he first presents himself and his villagers to his King.

Figures 1 and *2* show the seating at an informal and at a
formal ceremony. The participants sit cross-legged, with the 276
chief whose title is genealogically the most senior at the head of 574
the circle. He has an official called a matāpule on either side of 565 [516]

[TEXT CONTINUED ON PAGE 210]

state, church, and education. As a surviving, highly visible sector of legally 565
supported hereditary privilege, offering exclusive access to sources of wealth, 178
influence, and power within the Tongan new order, the nobles are increasingly 565
criticized by Tongans and outside observers as a source of injustice in a society
that was created on the themes of emancipation and individual liberty. The 178
tempo of such criticisms has increased significantly since the succession in 829
1965 of Tupou IV, who is committed to modernization and closer relations 185
with other regional and world governments.

Although viewed stereotypically by some as an anachronistic and 565
conservative segment of society, the nobility in terms of the composition and
activities of its membership cannot be fairly characterized so one-dimensionally.
As social historians have shown for old elites in the transformations of European [171]
societies (see Moore, 1967; Stone, 1965), the composition of Tonga's hereditary
nobility, although fixed and rigid in principle, has been characterized by a
degree in fluidity. Further, its response to generally modernizing and liberating
changes has in fact revealed some degree of flexibility and accommodation.

Issues raised in the public litigation of noble succession, a matter determined 565
by law and the Tongan Land Court, offer a perspective on the nature of the 428
social composition of the nobility and also on the significance of the noble
title system as a determinant of social status in modern Tonga. The purpose 121
of this paper is to present a detailed account of noble succession disputes and
to discuss what these disputes indicate concerning the position of the nobility
in modern Tongan society. I have described the modern social contexts and 114
activities of the nobility elsewhere (Marcus, 1975b).

Trends of Change in Tongan Society

The Kingdom of Tonga consists of an archipelago of 150 islands with a 131
total area of 269 square miles. These islands are just west of the International
Dateline, about 430 miles southeast of Suva, Fiji, a similar distance southwest
of Western Samoa, and about 1,200 miles northeast of Auckland, New Zealand.

Only about 36 islands of the archipelago are inhabited, and these are 361
clustered in three main groups: the southern or the Tongatapu group, including
the single largest island of the Kingdom, Tongatapu, on which the port capital
of Nuku'alofa is located; the middle or Ha'apai group of widely scattered small
islands; and the northern or Vava'u group of islands. The rapidly increasing 161
population has been estimated to have reached 100,000. In recent years, land
shortage and rising aspirations, resulting from increased contacts with the outside, 178
have been accompanied by marked increases both in internal migration from 166
the outer islands to Tongatapu and in temporary and permanent migration 167
abroad to countries such as New Zealand and the United States. The Tongan 433
economy is predominantly agricultural, based on mixed-crop production by 241

GEOGRAPHY OF TONGA.

THE TONGAN ISLANDS: THEIR POSITION AND FORMATION.

131 There are over 150 islands in the Tongan group, but most of them
are very small and only 36 are inhabited. The total area is 269 square
[161] miles, and the population is 28,839. Thus Tonga is one of the smallest
groups in the Pacific Ocean, very much smaller than Fiji or Samoa, for
example.

The islands are divided into three main groups; these are, TOGA-
631 TABU in the south, HA'ABAI in the centre, and VAVA'U in the north.
131 Ha'abai is an extensive archipelago of very small islands, but the Togatabu
and Vava'u groups consist of one larger island as well as many small
adjacent islands in each case. This division is not merely geographical
[504] but also commercial and political. The three ports of call are Nuku'alofa,
the capital, in Togatabu; Lifuka, the main island of Ha'abai; and Neiafu,
[634] the chief village of Vava'u. The Government is represented by separate
Governors in Ha'abai and Vava'u.

Although the total area of Tonga is so small, the islands are
131 scattered over a comparatively wide expanse of the South Pacific Ocean,
between 15° and 22° South Latitude and 173° and 175° West Longitude.
The position of Togatabu is 21° South Latitude and 175° West Longitude.
Vava'u is in approximately the same latitude as Townsville, and Togatabu
as Mackay, North Queensland.

805 Tonga actually is in the Western Hemisphere, but in spite of this it
observes eastern time, that is, the same time as places in the Eastern
Hemisphere (Europe, Asia, etc., and as far as Fiji), and not the time
of the Western Hemisphere (America, etc.). For instance, when it is
2.20 p.m. Thursday at Nuku'alofa, it is 2 p.m. at Suva, 1.30 p.m. at
Auckland, 12 noon at Sydney and 2 a.m. at London—all these times
being on Thursday—but it is Wednesday, 6 p.m. at San Francisco (U.S.A.)
and 2.30 p.m. at Apia. Although it is 2.30 p.m. in Samoa when it is
805 2.20 p.m. in Tonga, nevertheless, the day is rightly called Wednesday
648 in Samoa, while in Tonga it is called Thursday, owing to the fact that,
as Tonga's commercial dealings are chiefly with Australia, New Zealand
and Fiji, it observes the same day as those countries.

131 Nuku'alofa is 2,000 miles direct from Sydney; by the steamer
route, the distance is 1,740 miles from Sydney to Suva, and 430 miles
from Suva to Nuku'alofa. The distance from Nuku'alofa to Auckland
is 1,100 miles, about 50 miles less than from Suva to Auckland.

The Tongan Islands are called oceanic islands, as they are not
133 close to a continent nor surrounded by shallow water, thus differing from
continental islands like Great Britain. The ocean west of Tonga is less
than two miles deep, but east of 'Eua it is over five miles deep; indeed,
there is a very deep trough or ocean-valley, called the Tonga Deep, which
passes east of Tonga and continues to the east of New Zealand, reaching
a depth of nearly six miles off the Kermadec Islands between Tonga
and New Zealand. The Tonga Deep is one of the deepest parts of the

206 Wireless stations have been established at Nuku'alofa, Lifuka (Ha'abai), Vava'u, Niua Fo'ou and Niua Tobutabu ; only the first station has communication with other countries. There is also a telephone service at Nuku'alofa.

494 The advent of motor traffic has made the improvement of roads
necessary, and these have been built with the only available stone, coral
491 limestone.

VITAL STATISTICS, EDUCATION AND RELIGION.

161 The estimated population, full-blooded Tongans only, on 31st December, 1931, was 29,157. Tonga is one of the comparatively few Pacific Island groups where the population is steadily increasing. There is no justification for imagining that the population of Tonga has ever reached 30,000, but rather the indications are that, even in the most prosperous times before the coming of Europeans, it did not exceed 25,000. The present figures may therefore be taken as the highest level which the Tongan population has reached, and there is no fear that the country cannot support a population continuing to increase at the present rate for several decades.

162 Reference is sometimes made to Cook's statement that 10,000
175 people were present at the festival held in his honour at Togatabu, and
161 3,000 at Lifuka. Especially bearing in mind the visitors who would come
from other islands for such a unique event, these figures certainly do not
justify a belief in a greater population than the present. The land seemed
361 then to be better occupied as the people were spread out over their gar-
175 dens, there being no villages until the Civil War period.

Wilkes received an estimate from the missionaries in 1840, and
161 this may be compared with the Government statistics in this century,
[165] noting the effects of the pneumonic influenza epidemic in 1918–19 and
the way in which the loss of 1,000 lives then has since been more than
redeemed (these figures are for full-blooded Tongans only) :

1840	18,500	(excluding the two Niuas)
1900	20,019	
1911	21,712	
1917	24,245	
1918	23,842	
1919	22,689	
1920	23,128	
1924	25,109	
1927	26,597	
1929	27,660	
1930	28,431	
1931	29,157	

161 The Police Census of 27th April, 1931, gives a total of 28,839,
162 comprising 27,700 Tongans (this involving a discrepancy with the estimate
of the Registrar of Births and Deaths), 482 Europeans, 265 half-castes,
336 other Pacific Islanders, 56 foreigners, mostly Asiatics.

563 Racial inter-marriage is not so common at the present time ; nevertheless, a considerable proportion of those officially classed as "full-

87: Wood M,Y-4,5 (no date) 1932 OU9 Tonga OU9

APPENDIX F.

TOTALS OF AREA AND POPULATION.

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		Area (sq. miles)	Population
(1)	'Ata (Pylstaart)	0.9	-
(2)	Southern Group : Togatabu, etc.	101.1	12,357
	'Eua	33.7	348
(3)	Huga Toga and Huga Ha'abai	0.4	-
(4)	Middle Group : Ha'abai	50.1	6,410
(5)	Northern Group : Vava'u	56.1	7,643
(6)	Niua Tobutabu and Tafahi	7.2	790
(7)	Niua Fo'ou	19.4	1,291
		268.9	28,839

000 for self-identity.

Population Characteristics

101 Very little is known about the characteristics of the
Tongan population before European contact except that the
people were Polynesian culturally and physically.

Population size

175 Cook estimated at least 10,000 to 12,000 people
162 attended a dance in his honor on Tongatapu in 1777. Peron
in 1796 estimated around 25,000 people were seen in canoes
175 and along beaches of Tongatapu (Maude, 1965:26-27). Later
161 estimates of Tonga's pre-European contact population have
[162] been as high as 50,000 (Matoto, 1971:2). Maude (1965:26-27)
estimates that the population in 1799, at the onset of the
period of civil disorder, was at least 30,000 for the
entire archipelago and 13,000 for Tongatapu.

161 There is no evidence of any population loss until the
beginning of the nineteenth century, when a decline began
161 which lasted almost 100 years. The major causes of this
165 decline seem to have been the civil wars and numerous epi-
669 demics. The missionary John Williams (1837:308) wrote that
until a *few* year before 1830 "the whole island was in a high
state of cultivation, until frequent wars, combined with
successive attacks of dysentery and other diseases, had so
fearfully reduced the populations." Other accounts by Vason

161 and Mariner attest to the fact that "many people, men, women
165 and children, were killed in the actual fighting, while
669 others apparently died from famines caused by the destruction of food crops and the lack of new planting" (Maude,
161 1965:45). Further evidence of this decline is a population
162 figure of 8,000 for Tongatapu and 18,500 for the entire archipelago (based on estimates made by missionaries on Tongatapu), which was reported by Wilkes in 1840 (Maude 1965: 26-27).

165 After the cessation of civil war in 1852, European diseases such as measles, whooping cough, influenza, and dysentery (to which the Tongans had little natural immunity) became the main cause of death. Heavy loss of life resulted from epidemics, which were common occurrences throughout the South Pacific during the nineteenth century. "The sickness (occurring sometime between 1812 and 1845) that was brought by a (Tongan) vessel from Fiji . . . . raged so badly in the three groups, Tonga, Ha'apai, and Vava'u (that) it is said that they were not able to carry the dead away and bury them" (Gifford, 1929:209). As a result of the measles epidemic which occurred in Nuku'alofa in 1893, "one twentieth of the population was carried off, and the remainder was so demoralized that it was threatened with famine" (Thompson,
161 1894:286). From an estimated population of 30,000 the Tongan population probably declined during the nineteenth century to below 20,000. The figure of 18,500 reported in

161 1840 by Wilkes may have been an excessively conservative
estimate (Maude, 1965:46), and the figure of 19,186 obtained
from the first official census in 1891 (Matoto, 1971:9) is
probably a better indication of the Tongan population at its
lowest point. From studies of population trends in the
South Pacific in general, Keesing (1942:47) estimated that
"the lowest points in Polynesian populations were reached
variously from 1890 to 1910."

161 The trend of a declining population was reversed around
165 the turn of the century, especially after World War I (Table
6), although about 1600 Tongans died in the worldwide influ-
161 enza epidemic of 1918 (Gifford, 1929:330). Since then,
Tongan population has grown rapidly and, at present, Tonga
has one of the highest population growth rates in the world,
approximately three per cent per annum (Dommen, 1971:6).

161 This rapid growth can be attributed to the development
743 of a medical service, the construction of hospitals, an
312 improvement of public water supplies, an increase in natural
178 immunity to foreign diseases on the part of Tongans, and
post-World War II economic prosperity.

161 From 1921 until the last official census in 1966, the
166 population of the Kingdom increased by about 225 percent
and the population of Tongatapu increased by 390 percent,
168 partly owing to immigration from the outer islands. The
842 Tongan government hopes that the present "family planning"
campaign will help to reduce this growth rate.

161 162 Table 6. Population of Tongatapu and Tonga, 1777-1971.

Year	Tongatapu	Tonga	Source
1777	10,000-12,000+	-	Estimate
1796	25,000+	-	Estimate
1800	13,000	30,000	Estimate
1840	8,000	18,500	Estimate
1852	-	20,000+	Estimate
1853	-	22,000	Estimate
1891	-	19,968	Census
1911	-	23,017	Census
1921	9,794	23,759	Census
1931	-	28,539	Census
1939	15,754	34,130	Census
1950	-	45,070	Estimate
1956	31,264	56,338	Census
1966	47,920	77,429	Census
1971	58,872	89,761	Estimate

Sources: 1777, 1796, 1800, 1840, 1853, 1911, 1950 (Maude, 1965; 26-27 and 46-47); 1852 (Matoto, 1971:9); 1891, 1956 (Toupouniua, 1958:1-17); 1921, 1966 (Fiefia, 1968:9); 1971 projections based on 1966 figures.

842 However, a 1970 study of "attitudes and practices in regard to fertility and its control" conducted by the University of Hawaii School of Public Health indicated that there are

842 **definite barriers to the success of family planning in Tonga. One of the foremost is the cultural desirability of**
163 **having large families. The average fertility rate, based on the study, was estimated at 7.3 births per woman (Wolff**
000 **and De Sarmo, 1970:6-23). Even if the birth rate were reduced to two per cent per annum, the Kingdom's population in 1996 would be close to 150,000, with over 100,000 on Tongatapu; the population density for Tongatapu would then be over 1,000 people per square mile (386 per square kilometer) or approximately 17.7 persons per bush allotment (based on the present number of 5,652 bush allotments on**
161 **Tongatapu). The estimated population density for Tongatapu at the time of this study in 1971 was 626 persons per square mile (about 242 per square kilometer) or about 10.4**
000 **persons per bush allotment. Such a population increase will inevitably change the existing agricultural system through a shortening of fallow periods and a reorientation**
241 **of cropping practices and plant selection. Incipient**
182 **changes are already taking place with the supplanting of yams, bananas, and taro as the main subsistence crops by manioc, which has a shorter growth period and will continue to produce high yields when planted repeatedly on the same**
000 **plot. Finally, there will be further increases in the number of landless Tongans who will have to look for employment outside the agricultural sector.**

Population Distribution

161 162 The distribution of population also has an effect on the nature of the agricultural system. Since European contact, there have been major Kingdom-wide changes in the distribution of the population, as well as changes within each island group.

161 162 [166] Immigration from the outer islands has resulted in a disproportionate growth of Tongatapu's population. Population figures from four censuses (Table 7) show that whereas Tongatapu had just over 40 percent of the Kingdom's population in 1921, it now has over 60 percent. From 1956 to 1966 population growth in the outer islands was less than one-third that of Tongatapu. During these ten years, population growth has been 76 percent in the capital city of Nuku'alofa and environs; even in rural Tongatapu, the growth rate of 43 percent is greater than that of the Kingdom as a whole (Tupouniua, 1958:42-45; Fiefia, 1968:38-42).

166 369 Incentives for migration to Tongatapu and especially to Nuku'alofa include: better educational and recreational facilities; opportunities for wage labor; better transportation and chances to go overseas; more developed network for marketing agricultural products locally and overseas; and the general aura and excitement of urban life. 161 162 182 311 Regardless of the motives for population redistribution, the effect on Tongatapu's agriculture is considerable, and there is an increased demand for land and a burgeoning landless class on Tongatapu.

161
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Table 7. Population of Tongatapu (including 'Atata and 'Eueiki), other islands, and Tonga.

Area	1921	1939	1956	1966
Tongatapu	9,794	15,754	31,264	47,920
Other Islands	13,965	18,376	25,574	29,509
Tonga	23,759	34,130	56,833	77,429

Sources: Tupouniua, 1958:41; Fiefia, 1968:9.

class on Tongatapu.

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433
The local marketplace, Talamahu Market, is becoming increasingly important as a source of food for the non-agrarian sector of the population and as a source of cash for the agrarian sectors.

175
361
Settlement Patterns

[351]
At the time of European contact, the settlement pattern was reportedly of dispersed residences on individual garden allotments in the bush. Tasman, in 1643, found that "each man lived in his own garden, the allotments being separated by reed fences" (Wood, 1945:15). Cook, in 1773, described Tongatapu as follows:

[487]
> The lanes or roads necessary for travelling are laid out in a judicious manner, as to open a free and easy communication from one part of the island to the other. Here are no town or villages; most of the houses are built in the plantations, with no other order than what conveniency requires (Gifford, 1929:5).

423 but the same problem exists there (Table 11).

Table 10. Total land area of Tongatapu (including Kanatea and Nukunukumotu) by major land tenure types, 1971-1972.

Type of Tenure	Acreage	Hectares	Total %
Bush allotments	45,214	18,298	71
Undivided portions of hereditary estates	3,138	1,270	5
[427] Church (charity leases)	(2,779)	(1,125)	
Foreign leases	(1,303)	(527)	
Tongan leases	(800)	(324)	
Total leasehold land	4,882	1,976	8
Crown land including town allotments	10,382	4,202	16
TOTAL	63,616	25,745	100

Source: Lands and Survey Department Records.

● [161] Given the present rate of population growth of approximately three percent and the increasing migration to Tongatapu from the other island groups, the situation was undoubtedly more critical in 1971 than in 1966 and will deteriorate in the future. According to Lands and Survey Department personnel, there is also a shortage of town allotments.

423
592 Although legal rights to tenure of bush and town allotments are held by individuals, access to agricultural land

423 allotments, some households and many individuals have only
425 temporary tenure. They are generally younger brothers who
were not legal heirs or are immigrants from other islands
or districts. The ability of an individual or household to
obtain temporary occupancy seems to be, to a great extent,
contingent on fulfillment of social obligations.

423 Finally, it is not uncommon to find landholders rent-
425 ing their land to others, although strictly forbidden under
427 law. An increasingly common practice seems to be rental to
[241] farmers who want additional acreage for commercial crops,
such as bananas, watermelons, and garden vegetables, or for
[435] yams to be sold locally. The rental fee for an eight and a
quarter allotment ranges from as low as five to over a
hundred dollars per year or a percentage of the profits.
The period of rental usually runs from one to five years.
It depends on the individual agreement whether the tenant
has usufruct rights to coconuts planted on the allotment.
Many Tongans who are willing to rent all or part of their
allotments are wage earners rather than full-time farmers.

Tables 14 and 15 show the nature of tenure to bush
423 and town allotments for the sample households on Tongatapu.
[369] The highest percentage [illegible] registered allotments are in the
urban area of Nuku'alofa (Kolomotu'a, Kolofo'ou and Ma'ufanga)
[161] and Kolovai, both areas with high population densities and
smaller parcels of land. Similarly, in Kolonga, one of the
first areas to be resurveyed according to the Cadastral

89: Wood M,Y-4,5 (1924-1937) 1975
OU9 Tonga OU9

TONGA

Chapter I.

TONGA IN PRE-CHRISTIAN TIMES

The Tongan people have preserved a rudimentary knowledge of their early 173
history. This was transmitted to successive generations through poems, expressed
in singing and festival dancing. With pride of race and tenacious memories the
Tongans were able to recall the deeds of kings and other great chiefs that were
celebrated in these poems.

The first of the line of sacred kings, the Tu'i Tonga, ruled about 950 A.D., and the names of all the kings in this line, thirty-eight in number, were orally recorded. For almost a thousand years Tongans served their chiefs, cultivated their soil, skilfully sailed the surrounding seas, and enjoyed the possession of their small islands undisturbed by contact with the outside world.

Tonga is the southern point of the triangle, Fiji-Samoa-Tonga. With a total 131
area of only 269 square miles, this island-cluster seems to have had a stable [161]
population of from 18,000 to 25,000 in pre-European times. The three main
sections are Tongatapu (with the capital, Nuku'alofa) in the south, Ha'apai (a
scattered group of which the main island is Lifuka), and Vava'u (with its chief
town, Neiafu) in the north. Tongatapu, or Sacred Tonga, was so called because [103]
it was regarded as the residence of the great gods.(1) The distance from Tongatapu
to Vava'u is 170 miles. The islands run in two lines. The eastern line is of 133
coral formation, nearly all being low islands. The largest island in the whole
group, Tongatapu, 99 square miles, rises to only 270 feet. The western line
consists of volcanic islands, mostly extinct and with few inhabitants now, except
the far northerly islands of Niua Toputapu and Niua Fo'ou.

Tongans are a branch of the light-brown Polynesian race; affinities of 144
language and similar physical characteristics show their close relationship with
Samoans, Maoris, Hawaiians, and the inhabitants of the many groups in Eastern
Polynesia. "The greatest ocean pathfinders the world has known"(2), the 174
Polynesians are believed to have come from Asia, "pushed off the mainland of
Asia".(3) Approximate dates and the paths of these migrations are still the subject
of inquiry and much debate(4).

Tongan traditions firmly place Samoa as the land from which their ancestors 173
finally migrated to their present home. These stories refer to the islands of
Manu'a in the east of the Samoan group as the residence of the ancient chiefs
who claimed descent from the sky-gods, the Tangaloa. Furthermore, it was from
Manu'a that Maui, the mythical hero from the under-world, was said to have
obtained the fish-hook with which he pulled up Tongatapu and other low islands
in the Tongan group from the ocean-bed. The first Tu'i Tonga, 'Ahoeitu, was

[1800-

Tongatapu. If Tahiti had proved an unsuitable field and if conditions in Tongatapu 175
were more favourable, he was instructed to take all the missionaries to Tongatapu 797
"as a refuge for the whole of our brethren".(3) Instead of being able to fulfil these instructions he found that the Mission in Tongatapu had ended in complete failure.

Vason, who had accompanied Finau 'Ulukalala to Vava'u after a lull in the fighting in Tongatapu, was able to get a passage on the same ship, *Royal Admiral*, when it called at Vava'u in August 1801. In England he sincerely repented of his apostasy and his participation in the savage conflicts in Tongatapu. Thenceforth he lived a quiet Christian life and was Governor of Nottingham Gaol for some years. During this time he wrote his *Authentic Narrative of Four Years' Existence at Tongatapu*, A which narrated the experiences of the L.M.S. missionaries.

Conditions in Tonga deteriorated still further in the next few years, with 175
repeated attacks on Tongatapu and the destruction of plantations by Finau 669
'Uluakalala's marauding parties. Most of the people in that island lived in forts
for safety, and practically no planting was done for fear of being ambushed in
the gardens. The consequence was famine, more terrible than any known before [731]
these disastrous years. Famine raged in Ha'apai also. The cannibalism practised
out of bravado during the fighting was extended even to the eating of the flesh [266]
of relatives, because of the desperate plight of the famine-stricken people. It has [165]
been estimated that more than one-fourth of the population of Tonga died in
the period 1799-1820 as victims of war and famine. The early Wesleyan [161]
missionaries noted as an evidence of the depopulation of Tongatapu that females [162]
outnumbered males approximately two to one.

Footnotes

(1) Newbury, C. M., edition of John Davies, *History of the Tahitian Mission, 1799-1830*, Vol. I, p. xxix. 113
(2) Lovett, R., *History of the London Missionary Society, 1795-1895*, Vol. I, p.64.
(3) McKern, W. C., *Archaeology of Tonga*, p.122.
(4) Derrick, R. A., *A History of Fiji*, p.122.
(5) Haweis, Dr. Thomas, *Papers; Royal Admiral Journal*, A.1963. M.L.S.

A /see 12: Vason, this file -- Analyst/

[1947-1971]

and disposed him to introduce new measures to expand Tonga's productivity. His brother, John Ngu Tu'ipelehake, also studied in Australia, specializing in agriculture. The princes' double wedding in 1947 was an occasion of great rejoicing among the people. 644 [178]

In 1953 the Queen visited Britain by invitation, to attend the coronation of Queen Elizabeth. There she won the affection of all who saw her, so that even to the present day the names "Tonga" and "Queen Salote" are linked in their minds. When she arrived, she soon attracted attention as "the tallest Queen of the smallest kingdom in the world". Her unaffected, yet regal, manner and her geniality made her the darling of the British public before the memorable day when, returning from Westminster Abbey, the Queen would not allow the hood of her carriage to be raised as protection against a continuous downpour. To the tumultous cheering of the hundreds of thousands who lined the route, she rode, waving enthusiastically in response to their cheers, when not wiping the rain from her forehead with her handkerchief. A leading article in a London newspaper said, "Few visitors from overseas can ever have endeared themselves so widely and speedily to the British people as the majestic lady who braved the drenching of the Coronation procession in her open carriage". 643 484

It was with great rejoicing that the Tongan people heard that Queen Elizabeth and the Duke of Edinburgh wished to include Tonga in their itinerary later in the year. All parts of Tonga vied with each other in preparing lavish hospitality. The Queen vacated her palace for the royal visitors. She felt obliged in courtesy to drive round the palace all night, and 400 men and women were on guard the whole time with flaming torches, observing an old custom. The royal party attended the Sunday morning service at the Centenary Church, with over 2,000 people inside and many hundreds outside. The President, the Rev. A. E. McKay, with the Secretary of Conference, Sau Faupula, conducted the service. The choir sang the "Sanctus" from Bach's B Minor Mass and did so with the verve for which Tongan church choirs have become renowned. In her message to the royal party after its departure, Queen Salote said, "I do not doubt that this historic occasion has renewed the store of faith and joy in the hearts of my people as rain refreshes a garden". 648 643 [794] [533]

Tonga has been one of the most serious examples of population explosion. Efforts to increase production and to find additional exports have hardly coped with the needs of the rapidly expanding population. There has been a marked decline in the death rate and especially in infant mortality, as a result of the Government's improved medical and public health services. The birth rate, however, is still high — 29 per 1,000 in 1971. There was an increase of 35% in the population in the ten years, 1956-66. The population (always below 25,000 in the first quarter of the century) had swollen to 77,429 in the census of 1966. It is now estimated at 95,000 (1975), and to become 118,000 in 1980 — and this in a small archipelago with a total area of only 269 square miles where the inhabitants have to grow their food as well as cash-crops. The density of population is over 500 per square mile in Tongatapu, and much more in the small islands of Ha'apai where many men have no land. The family planning programme initiated by the Government has had little effect, largely through conservatism. In 1966, the average Tongan mother in the 35-45 age-group had slightly more than six children. The crowding into Nuku'alofa, which has grown from 3,000 fifty years ago to more than 25,000, has had unfortunate social consequences. Congestion, 161 163 [165] 161 [433] [162] [659] [842] [162]

[1926 - 1975]

unemployment and an increase in crime have followed. In the two years, from 161
1966 to 1968, there was an increase of 46% in juvenile crime. It was estimated 162
in 1968 that there would be 11,000 youths leaving school in the following ten [674]
years, with only 1,400 jobs available for them in Government, commerce and [464]
industry — and no gardening land for a large proportion of them.

In 1975 it is estimated that about one-half of the taxpayers have no land 162
in spite of their legal entitlement. Because of the social and economic consequences 423
of this disturbing situation the Methodist General Conference in Sydney in May [797]
1975 expressed its sympathetic concern to the people of Tonga.

Migration to New Zealand, California, Hawaii, and elsewhere, has grown 167
considerably but has done little to mitigate the population problem. Many of the 184
large number of Tongans educated overseas return to find a social and cultural 464
gap as well as difficulty in gaining suitable employment. Tourism has given 457
limited relief, in the sale of artifacts as well as fruit and vegetables. Against this 177
are ill-effects arising from contact with the undesirable types of tourists.

Faced with economic conditions which affect the people's moral and religious 795
well-being, the Church has had to re-assess its own situation and its impact on
the community. It has failed to increase in proportion to the growth of population. 795
In 1926 the Free Wesleyan Church was 59%, in 1956 49.75%, in 1966 49.85%. 162
The Mormons who were 2.3% in 1931 were 7.15% in 1966. In 1966 the Roman Catholics were 15.9%, the Free Church 14.3%, Church of Tonga 8.9%, Seventh Day Adventists 1.08%. New sects, including Pentecostalists, Jehovah's Witnesses and Baha'i, have entered the country.

The Free Wesleyan Church finds some satisfaction in the quality of its 795
ministry and in the development of its organization. In 1970 it had 13 ministers 793
with L.Th. diplomas, three with Diplomas in Religious Education (Melbourne College of Divinity), one Bachelor of Arts, two Bachelors of Divinity, one Doctor of Divinity. The Pacific Theological College in Suva, for advanced theological education, is supported by the Free Wesleyan Church and other Churches in many
Pacific Islands groups. Greater attention has been given to improved organization 795
and literature for Sunday Schools and youth groups. The Friendly Islands [444]
Bookshop was established in 1973 through the initiative of the Connexional [212]
Secretary, John M. Connan, B.Sc., B.D., to provide more material in English and Tongan for a people increasingly capable of benefiting from good literature.

At the local level religion still plays a major part in the Tongans' family and [771]
community life. The teachings and methods of the early missionaries have been continued, with the opportunities these have provided for singing, extemporaneous prayer and testimony in the services and "class meetings" that suit the Tongans' temperament. New forms, especially for young people, such as the Christian Endeavour Society, have been added. The three Churches which have sprung from the Wesleyan stock have generally followed the same pattern. What is distressing is the spectacle of division in even small villages. Two, and sometimes three, congregations worship simultaneously and not far apart from each other, using similar hymns and forms of worship, proclaiming the same doctrines, observing the same procedures — early Sunday morning prayer-meeting, two Sunday services, Sunday School, mid-week service, mid-week prayer meetings, "class meetings" for members, and the ever-popular choir practices. In many villages in recent years the rivalry has been worsened by the presence of other denominations also, with a total of five, six or more in some villages.

INTEGRATING TOURISM WITH OTHER INDUSTRIES IN TONGA

CHARLES F. URBANOWICZ

Tonga, with an area of 289 square miles, is 131
approximately 550 miles southwest of the islands of
Samoa and approximately 450 miles southeast of the
islands of Fiji, in the "heart" of Polynesia. The principal
island of the group is Tongatapu (100 square miles).
The estimated population of the Kingdom is slightly 161 ●
over 100,000 (1975). Most Tongans speak English as
a second language. The country is an independent King- 191
dom of the British Commonwealth of Nations.[1][A] 642

TOURISM AND THE TONGAN ECONOMY

Tongans are primarily exporters of agricul- 179
tural commodities. Tourist development is still in the 457
relatively early stages. Given certain conditions, tourism
could be considered a major industry of the future for [439]
Tongans. The Kingdom has taken the position that the
potential of the tourist industry is much greater than
any other aspect of the economy.[2][B] This "potential" may
well be debated, for without adequate design-for-tourism, the impact of tourism could be disastrous.

Tourists arrive in Tonga either by private yacht, by cruise ships which make one or two-day stops,

A, B, [For footnotes, see p. 93-A--Analyst]

91: Urbanowicz E-4,5 (1970-1971) 1977
OU9 Tonga OU9

5

Tourism in Tonga: Troubled Times

CHARLES F. URBANOWICZ

The Kingdom of Tonga lies in the heart of fabled Polynesia, approximately 131
550 miles southwest of Samoa and 450 miles southeast of Fiji. The
tiny kingdom encompasses approximately 289 square miles and supports [161]
an estimated (1975) population of 100,105—an average density of more
than 346 persons per square mile. However, the actual usable land
available for settlement is only 190 square miles, giving a true population
density of 532 persons per square mile. The population is not evenly [162]
distributed and the largest island of the group, Tongatapu (100 square
miles with a population of 52,000) is the economic center for the
archipelago. This island has also been the historic residence of the [633]
aboriginal (Royal) leaders, and Nuku'alofa—the largest city, the capital,
and the main tourist target—is located there.

Formerly a British protectorate, Tonga achieved independence in 1970 642
and entered the British Commonwealth of Nations. The Constitutional
Monarchy dates to 1875 and the current monarch, His Majesty King [643]
Taufa'ahau Tupou IV, acceded to the throne in 1965. Tongan is the 197
official language, English is the second language and most Tongans are 191
bilingual. The population is also ethnically uniform: 98 percent of the
population are Tongans, and all are stalwart Christians. The 1966 census 162
listed 77,429 inhabitants, only 61 of whom failed to declare a religious 771
affiliation.

Tourism is nascent in Tonga, but the number of visitors is increasing 457
annually due to extensive overseas promotions that stress, in colorful
brochures, the beauty of "unspoiled" Polynesia, where English is spoken
and where there is a "real live King (and Queen)." Although Tonga is the
last surviving Polynesian Kingdom, it is far from being the "storybook"
land of the culture brokers. It is an overpopulated and underdeveloped
tiny nation, struggling to maintain its cultural integrity in the face of
twentieth-century changes. There are serious internal economic problems
in Tonga, for which tourism might be the panacea. This case study [121]

161 In approximately 1800, Goldman's most useful "terminal date" for aboriginal Polynesian society in general, a numerical estimate of the Tongan population would probably fall within the range of 15 to 20 thousand people.[22] In attempting to interpret aboriginal and changing Tongan society from 1800 on, the figure of approximately 15,000 Tongans 114 is useful to keep in mind. Quite frankly, the failure to keep the size of the population in mind is one of the major reasons that there have been so many alternatives in interpreting aboriginal Polynesian society in general: Sahlins stressing the environment and Goldman emphasising status rivalry as the interpretive paradigm.[23]

There are obviously more Tongans in the 20th century than there were before European contact in Tonga, and various researchers have tended erroneously to project from the interaction patterns of 20th century Tongans to what they (the researchers) have believed to have been the interaction patterns of aboriginal Tongans.[24]

A considerable amount of convoluted thinking about Tonga has resulted 114 from the fact that researchers have not consistently taken into account 177 that aboriginal Tonga is not traditional Tonga, *and* the fact that many 20th century Tongans may have formed their views of what aboriginal Tonga *was* by reading European accounts of Tonga. Consider, for example, the following statement from Gifford's 1929 work:

> Of the published works Mariner's Tonga Islands [first published in English in 1817] is by far the most extensive and possesses the merit of great accuracy and understanding on the part of its author. Doubtless Mariner's work is to be regarded as the standard by which modern work is to be checked. A comparison of Mariner's records with mine near the completion of my [1920–1921] sojourn in Tonga revealed a surprising similarity in the two sets of data recorded more than a century apart. Judged by this standard the data recorded in this paper have a relatively high degree of accuracy in spite of 75 years of Christianity in Tonga.[25]

This is all well and good, but the above should be read in conjunction with a statement that Gifford made in an article for this *Journal* in 1924, and which *was not* repeated in the 1929 monograph: "Moreover, many a Tongan's clear conception of the affairs of his nation in the first decade and a half of the 19th century is due to his reading Mariner's 'Tongan Islands' translated into Tongan."[26]

Another, and perhaps the most important, factor which must be kept 642 in mind when attempting to interpret aboriginal (or early-contacted) 177 Tongan society is the Tongan Constitution of 1875 promulgated by King George Tupou I (with the assistance of European advisers). With the introduction of this Constitution much of the inherent consensus and flexibility of aboriginal Tongan society was solidified into a pseudo-

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[22] Goldman 1970: xxviii.
[23] Sahlins 1958; Goldman 1970.
[24] For examples, see Kaeppler 1971, Gifford 1929, Sahlins 1958, and Goldman 1970.
[25] Gifford 1929:3.
[26] Gifford 1924:289.

cultural context of population characteristics. The difference is that in 121
one case the demographer is invited onto anthropological territory, and
in the other case the anthropologist speaks the demographer's language.

Enumerating the Population of Motulahi

Rather than continuing to discuss household surveys in the abstract,
I shall use my own data from the Kingdom of Tonga as an example.
These materials were collected in the course of an anthropological in- 101
vestigation of local organization in Tonga (conducted over a ten-month
period in 1969—70).

The Tonga Islands lie just west of the International Dateline in the
South Pacific Ocean, east of Fiji and south of Samoa. There are about
150 named islands, but most of them are little more than elevated reefs
and have no potential for cultivation or settlement. Thirty-six islands
were inhabited at the time of the last reported census, held in 1966
(Fiefia 1968, Rogers 1969). These inhabited islands comprise 238.81
square miles, almost 90 % of the land area of Tonga. At the census of [161]
1966 the population was 77,429, of whom 98.31 % were classified as [162]
Tongan (in contrast to others such as Europeans, part-Europeans, and
other Pacific Islanders). The majority of the population lives in villages [361]
that are dotted throughout the islands in a nuclear pattern of village
settlements. Most of the people who live in the rural areas and many of [241]
those who live in the towns are wholly or partially dependent for their [433]
livelihoods on peasant agriculture.

My research was based in the village of Motulahi, one of the largest 114
villages on Tongatapu, the main island of Tonga. It might be asked
whether Motulahi is a typical village. However, the nation of a typical 184
village has no application to Tonga, for there is considerable diversity
among Tongan villages with respect to a number of important variables.
For example, there are significant differences between isolated village-islands on the one hand and villages on the relatively large island of
Tongatapu on the other, or between a village on Tongatapu less than
a mile from the capital town and another at the far end of Tongatapu.
Villages in Tonga also differ considerably with respect to size of population, from less than one hundred people to more than one thousand,
and the dimension of size cuts across the dimension of location. There

Langa Fonua Formed In 1954

Women's work in Tonga is recognised 462
throughout as having a vital part to play
in the natural structure and economy. It 643
was after Queen Salote returned from 462
her triumphant participation in the
Coronation of Queen Elizabeth in London 575
in 1953 that she called together a group
of leading women in Tonga, particularly
members of the Pan-Pacific and South-East Asia Women's Association, to discuss the formation of a local equivalent to Women's Institutes.

Out of this came the *Langa Fonua*, 462
which was inaugurated on May 7, 1954.
It is a movement dedicated to the 575
progress of home and community through 873
the continuous education and inspiration of the women throughout the villages.

Among a population estimated in [161]
1955 as 56,000 there are now approximately 1,000 members in Tongatapu and the other islands, with 23 branches in Tongatapu alone, each with its own Leader and Secretary, while the policy and general directive for the movement comes from the Central Committee elected at
the annual general meeting. Queen [643]
Salote is President of the *Langa Fonua*.

Headquarters House In Nuku'alofa

An outstanding feature is the head- 342
quarters house in Nuku'alofa, in the
centre of that small town. It is a [351]
spacious, cool, handsomely equipped dwelling house, surrounded by a wide

[P. 26-C]

137 /12 cont./
241 of the island, left standing as a protection for the plantings.

174 Polynesians, probably coming from Samoa, reached this
Archipelago 1000 to 1500 years ago, and settled many of its islands.
All the Tonga Islands, from Niua Fo'ou and Niua Toputapu in the north
to 'Ata in the south, formed a kingdom headed by Tu'i Tonga. The
[173] latter lost power after approximately 1470, when it passed over in
part to collateral lines (Tu'i Ha'atakalaua and Tu'i Kanokupolu) of the
175 ruling family. A revolt in the year 1799 introduced a period of
177 civil-warlike confusion that did not end until 1852. At this time
[669] European influences (5)
has long since reached Tonga. For in the year 1616 Niua Toputapu and
Niua Fo'ou were discovered by Shouten and Le Maire, in 1643 Abel
Janszon Tasman found 'Ata, 'Eua, Tongatapu, Nomuka, Tofua and Kao, and
from the year 1767 (Wallis) the Tonga Islands were increasingly
visited by European ships. In 1795 the first whites settled in the
[797] Archipelago, and the systematic missionary work in the island group
began in the year 1826. At the end of the civil wars and after the
175 643 first quarter century of successful mission work, Chief Taufa'ahau of
Ha'apai, who possessed certain rights to the ruling title of Tu'i
Kanokupolu, headed the united Christian state of all Tonga Islands, as
King George Tupou I. (6)

5. By "European" influences we mean, above all, West European influences, especially English and, related to these, Australian, New Zealand and North American influences.

[113] 6. A more detailed description of the development from 1616 to 1852 in G. Koch, Die Fruhen europaischen Einflusse auf die Kultur der Bewohner der Tonga-Inseln /The early European influences on the culture of the inhabitants of the Tonga Islands/. Manuscript dissertation, Gottingen 1949.

642 161 648 /13/ Today the Tonga Kingdom with a population of nearly 50,000 natives

548 /13 cont./
[642] is a constitutional monarchy under the protectorate of Great Britain.
[161] An appropriate treaty of friendship and protection was signed in May 1900. In 1905 a revisionary treaty was concluded, which was followed in the course of the years by various supplementary agreements. According to these agreements, Great Britain protects Tonga against outside attacks. A representative of Great Britain with the title of "agent and consul" /cited in English/ resides in Nuku'alofa. As a member of the British colonial administration he is responsible to the High Commissioner for the West Pacific. His duties and rights as an intermediary between the British and the Tongan government include: advising the Tongan government on foreign matters, control over finances, approving the appointment of Europeans to the service in the Tongan government, jurisdiction over British subjects and foreigners.
643 Apart from such restrictions, the administration of the Tonga Kingdom
645 rests in the hands of the Tongan government which consists of the
646 sovereign (at the present time Queen Salote Tupou, G.B.E.), the Council of State (Privy Council /cited in English/), the cabinet and the legislative assembly, parliament /cited in English/. The various
647 government posts are in general occupied by Tongans. A New Zealander
[645] holds the post of the finance minister. In the individual ministries
[563] white employees perform important work for the Tongan government; in general, they are more or less dependent on their Tonga superiors. (7)

7. Details about the functioning of this administrative apparatus in the chapter: "Governmental development and present structure" p. 157 ff.

563 At present, whites (altogether about 200) live on only three of the 36 inhabited Tonga Islands.

181 In this investigation, therefore, we are dealing with a primitive
177 people that has been under European influence for centuries and today still possesses relatively great freedom of self-determination.

/38 cont./

563
144
For in this small island kingdom the non-fullblooded native exists by no means "between two worlds" because the number of whites is small and because he is adopted without opposition by the even-tempered Tongan community which, at most, will regard him as not bound to specific, more strict Tongan customs of old.

Diseases

164 The Tongan's resistance to various diseases is good, (79)

79. For example, these islanders seem less susceptible to typhoid than Europeans, and a white physician reported that among 120 cases of pneumonia he had only two deaths, whereas in the European area he regarded 20% as the rule.

but it is very slight with regard to many diseases, especially the imported ones. (80)

80. For example, colds, influenza, tuberculosis, eye diseases.

The chief diseases in Tonga are pulmonary tuberculosis, pneumonia, conjunctivitis, trachoma, filariasis, frambesia, typhoid. Probably very many Tongans suffer from pulmonary tuberculosis. Systematic examinations, especially on the main island, are shortly expected to produce greater clarity. Occasional influenza epidemics can become very serious, with a large number of deaths. (81) [731]

● [161]
[113]
81. For example, the slowly increasing population of Tonga that numbered 24,245 in 1917 dropped to 22,689 in 1919 (according to E. W. Gifford, "Tongan Society" /cited in English/, B.P.B.M. Bulletin 61. Honolulu 1929. p. 6) as a result of the influenza epidemic of 1918; for the approximately 10,000 influenza cases of 1950, however, only three deaths were reported (Report of the Medical Department for the Year 1950. Nuku'alofa 1951. p. 8).

/39 cont./

164 177 262 84. See the chapter "Food" p. 275 ff.; the present very high prices for copra (chief export product) make it possible for every native to buy wheat flour, sugar (both often by the sackful), canned meat, fish and fat, and other food imported from Europe.

could be the frequently observable dental defects of young Tongan men and women, (85)

[752] 85. According to circumstances, defective, aching teeth are not filled but extracted, at any rate on the small islands.

as well as the striking occurrence of partial baldness among middle-aged and older males. (86)

86. This is not yet mentioned in the old sources.

166 It seems noteworthy that venereal diseases are not widespread in Tonga.
177 Summarizing, one may say that in this Archipelago the increase
[161] (or intensification) of diseases caused by European influence have had
no devastating effect on the population which, in the last 30 years,
has doubled and in the preceding decades (with the exception of the
influenza epidemic of 1918) remained on approximately the same level.

Health Care

657 There is an organized system of health care today in Tonga, the
744 beginnings of which go back to the missions, while now it is exclusively run by the government. All natives have a right to free medical and
dental (tooth extraction and filling) treatment financed by the Tongan
657 state. This treatment is at present carried out in the entire Archipelago
744 by a white physician known as "chief medical officer" /cited in English/,
759 by a second (pensioned) white physician who as "medical officer"
/cited in English/ has an advisory function, by approximately 20 Tongan
assistant physicians ("medical practitioners" /cited in English/) and
assistant dentists ("dental practitioners" /cited in English/), by

/83 cont./

851 followed by a small celebration.

527 852 The Tongans pay little attention to birthdays. Only the completed first year of a child is generally celebrated. The father's contribution to the festival is a well-filled earth oven (with pig[s], yams, taro, sweet potatoes, kape, manioc pudding, etc.), but the mother's relatives also generally contribute food (for example, a roast pig, a /84/ rich-cream cake, European-style), and there is an exchange of mat and tapa gifts. The celebration usually starts with a hymn and a prayer (this among the Wesleyans is often spoken by the pastor), then follows the feast at which 20 or 30 relatives and friends take part and at which the mother with her one-year-old child is given the place of honor. After the meal, the group breaks up.

527 852 177 [805] This festival marking the completion of the first year of life, which is celebrated by commoners as well as chiefs, is, at least as far as the date is concerned, a European-influenced arrangement, for in ancient Tonga an accurate calendar was unknown and birthdays could not be determined. The prayer and the presence of a pastor also show European influence.

165 163 Infant mortality is average. For example, of the 25 children born on the small island of Nomuka in the course of a year, four died. Today, in general, the number of births by far surpasses the deaths in the total population. (238)

[113] 238. In 1950, for example, 1798 births and 501 deaths were registered in Tonga (Report of the Department of Justice for the Year 1950 /cited in English., Nuku'alofa 1951. pp. 3/4).

[161] Since Tongans in the past very probably never numbered more than 25,000 persons, (239)

239. Compare E.W. Gifford, Tongan Society. p. 4; W.C. McKern, Archaeology of Tonga /cited in English/ p. 4.

/84 cont./

165 and since this figure has doubled in the past three decades, (240)
163
161 240. For example, for 1919. 22,689 Tonga are
reported (E.W. Gifford, Tongan Society.
(113) p. 6) and for 1949, 45,690 (Colonial Office,
Report on Tonga for the Year 1949 / cited in
English/. London 1950. p. 5).

we must assume that this birth surplus did not exist in the past.
[744] Undoubtedly, the improved health service is one of the reasons for
this change. However, if we consider the still very inadequate medical
help and the indifference and negligence of the population of most of
the small islands of the Archipelago, we must conclude that the
population increase has other reasons as well. Yet, since the Tonga
[842] in the past had no sort of birth control and it is not possible to
explain the present excess of births /over deaths/ by a "psychic
strengthening" of these natives, since there is no indication that
they were formerly "psychically weaker," it is very difficult to
interpret this change.

844 In general, we may say about the birth /process/ in Tonga that it
178 still takes place largely in the ancient Tongan manner, although
177 growing European influences must be reported. These may also be
seen in infant care (diet and clothing).

/85/

Death

761 The odd, yet to the Tongans already quite natural, coupling
177 of ancient Tongan traditions with Christian customs and European
178 material attributes, which we observed in wedding and birth, becomes
especially clear to us in /a consideration of/ death and burial.

763 For an old man who is near death the Tongans sometimes build,
343 as they did in olden times for dying chiefs, (241)

241. Compare E.W. Gifford, Tongan Society, p. 199.

a special small house where he is laid in preparation for death.
This not only gives the dying person special dignity, but it is also

/118 cont./

423 The system which is basically ideal in theory, shows a great defect in its practical application insofar as not every male Tonga /119/ over 16 cultivates the leased plot of 8 $^1/4$ acres assigned to him. A number of natives control larger piece of land (or [431] [425] several pieces) which they or their ancestors received as gifts from a Tongan sovereign or a nopele, (326)

> 326. For example, as a reward for special services or in memory of a youthful friendship.

and which consists of their own api'uta and the api'uta taken over from another person (kinsman), (327)

> 327. Thus, for example, a man in 'Uiha/'Uiha cultivates his api'uta and that of his son who is employed by the government in Nuku'alofa; another man cultivates his api'uta and that of his father, which his five-year-old son is supposed to inherit, while his father in turn works the api'uta of his father. The second case, in particular, is not in the spirit of the law.

or that is land which has been additionally rented in a legal manner. (328)

[671] [425] [427]

> 328. Decrees issued in 1927 and 1934 gave the natives who relinquish their claim to a dwelling place in the village the possibility to lease 12 and $^3/8$ (or 15) acres of bushland for planting purposes at a reduced rent. With this the government wishes to induce natives to live on their plantations rather than in the village. However, only a relatively small number of natives have hitherto made use of this possibility.

Very many Tongans, however, --especially among the densely populated Ha'apai group--have either a smaller api'uta (of only two, three or four acres) or own none at all. The population density in the [161] Archipelago, exclusive of the uninhabitable land, very probably

/119 cont./

[423] amounts to more than 200 individuals per square mile. The greatest
[161] density is in the Ha'apai Islands. There, for example, if there
[428] are three sons in a family, one of them (generally the oldest)
usually inherits, after the death of his parents, the *api'uta* of his
father (in addition to his *api kolo*) and the other two will often no
longer be able to receive an *api'uta* of their own if they apply for
[161] it. The Tongan population has grown very much in comparison with the
past, and there is sufficient land available only on the large
inhabited islands or on some uninhabited ones. (329)

[425]
[427]
[113]
329. In 1950, according to government documents, of the 188,975 acres available for distribution, only 78,345 had been given out (as *api'uta* to 8647 taxpayers and as lease lands to foreigners and Tongans). The remaining 110,630 acres were still available (minus the village and urban areas) (see *Report of the Minister of Lands for the Year 1950* /cited in English/. Nuku'alofa 1951. p. 1).

These two sons can get their own *api'uta* of 8^1/4 acres on Tongatapu or 'Eua, for example. But usually people prefer to remain on their home island. (330)

[162]
[425]
330. On the island of Nomuka, for example, among a total population of 567 souls, there are 69 men who have a right to an *api'uta*, but are unable to get it because all the land has been distributed; they are staying on Nomuka even though they would be able to receive their *api'uta* on Tongatapu, for example. While all land claims must still be provided for within the Archipelago, 4307 taxpayers in 1950 did not take over an api'uta for the aforementioned reasons (see *Report of the Minister of Lands for the Year 1950*. p. 2).

People are attached to their islands and their kinsmen, and they may
[425] also dislike to clear virgin land. Thus they stay in their villages,
[241]

/121 cont./

000 involved. Moreover, the Tongan population is growing very much; the
423 dearth of land in the Ha'apai Islands will increase, on the other
[161] inhabited islands land will become scarce after one or two generations.
[311] However, the opening-up of the Archipelago's uninhabited islands, as
well as a few land reclamation projects along the broken-up coasts
(or in the swamps) of the low islands (for example, Tongatapu), and
above all an intensification of agriculture will always be able to
provide relief.

423 Without doubt there is the possibility that a greater difference
184 between rich and poor will develop as a result of the unequal land
578 distribution, and on the small, already overcrowded Ha'apai Islands
social tensions might possibly arise. Today, however, nothing of
this kind can be observed; the Tongans live their relatively peaceful
lives and no one gets excited if he sees his neighbor ending up with
greater profits from his copra work because of his large plantation.

423 European advisers and critics admit that the present system
178 of land ownership is basically good, given the present state of
agriculture. Yet they emphasize that this system is not flexible
enough to make room for possible changes (improvements) in cultivation
and in increased cattle-raising, which is scarcely possible with
8 ¼ acres. Since, for the natives, the present system of planting
[241] suffices and they find it most difficult to adopt new food plants,
[233] and since they show relatively little understanding for cattle-raising
even where there is an opportunity, a change in the system does not,
for these reasons, seem very urgent.

423 /122/ On the whole, it may be said of land distribution that the
177 ancient Tongan system was altered as a result of Europeanization and
the establishment of a Christian, democratic government. However,
423 this change occurred more in form than in kind. The present system
565 of land distribution, which seems somewhat strange to us, means a

/131 cont./

342
178 as "good." These were built:

between 1860 and 1900.....4	between 1930 and 1940.....4
" 1900 " 1910....10	" 1940 " 1950....13
" 1910 " 1920.....3	1951.....3
" 1920 " 1930.....6	

47 further dwellings showed the ancient Tongan construction simplified and changed: in a few, the four supporting posts were thinner and were moved toward the walls. The framework was often weaker (and even a "stick construction") and also incomplete or augmented with additions (props, supports, etc.). The traditional [177] lashings of coconut-fiber cords were often supplemented or replaced entirely with nails (or with hibiscus-bast lashings, more seldom with European twine). These houses were erected during the following periods:

between 1860 and 1900.....1	between 1930 and 1940....4
" 1900 " 1910.....2	" 1940 " 1950...21
" 1910 " 1920.....1	1951/52...14
" 1920 " 1930.....4	

Though it may be assumed that in old times simplified constructions were occasionally erected, which deviated from the typical plan, the figures above seem to show that the proportion of weaker constructions is increasing at present. The increased house-building activity since [161] 1940 is presumably a consequence of the population increase (growing number of individuals of marriageable age).

342
177
178 'Uiha is a more remote settlement. That is one reason why the traditional construction has prevailed here to the extent mentioned. In a village like Fungamisi which is near the seaport of Neiafu and is subject to more intensive European influences, only one /dwelling/, among the 23 dwellings with ancient ground plan examined in 1952, was found whose construction was quite similar to that of ancient Tonga and deserved the rating "good"; it was built in 1950. The remaining

/149 cont./

177 ones of their own, or are simply regarded as "representative." This
178 change has, however, not essentially altered the ancient Tongan style
of household living. The great majority of natives use the seat mats
and the sleep mats, as did their forefathers, and have merely made
their traditional way of life more comfortable with the European
178 novelties. The difference between the furnishings of commoners and
565 nobles, which to some extent undoubtedly existed in earlier times, has
disappeared. With respect to Tongan cultural assets this must have
meant a loss in quantity and quality for nobles and a gain for
177 commoners. The acquisition of European things is today solely
dependent on financial means.

342 /150/ To sum up, we may say about the Tongan house and its
177 furnishings that all changes, as great as they may be in detail,
178 have by no means changed the function of the dwelling. As in old
times, it is the place where the family sleeps and rests. (396)

> 396. The set-up of the Tongan household and the distribution of houses on the individual properties in the village may be seen on page 80 ff., and the number of houses in the various villages on page 134.

[461] No work is done in the dwelling except the mat-plaiting of the women,
[285] and the cook area is still located in a separate hut.
[252]

B. FOOD

a) Cultivation

241 The Tongans were and are primarily farmers, and their cultivation
178 has undergone no fundamental change through European influences.
(177)

Very probably the size of the land cultivated today in the
Tonga Archipelago is as large as it was in ancient Tongan times. The
[161] considerable decrease of cultivation in the first half of the past
century (as a result of the civil wars from 1797 to 1852 and the
transition to village settlements) has as regards to the area of

241 /150 cont./

178 (161) cultivation probably been made up for since the population has doubled in comparison with ancient Tongan times, and since it nourishes itself primarily on home-grown products, the necessity for cultivation should be considerable. 241 311 Thus today, for example, the inhabited islands of the Ha'apai group are almost entirely covered with plantations of the natives, except for the strip of bush land along the shore (to protect the plantations against storms) covering approximately ten percent of the land. On the island of Nomuka, for example, according to the recollection of older natives, there was a great deal of unused bush land in the old times, whereas today all productive land is cultivated, however, on Tongatapu, 'Eua and Vava'u part of the land is still unused.

241 Considerably more work seems to be required of each individual to cultivate his land than even just a few decades ago. The views of informants on various islands of the Archipelago indicate that 30 or 40 years ago it was much easier than it is today for the Tongan to feed his family with what he planted, and several relatives besides. [134] The reason for this change probably lies particularly in the exhaustion of the soil on the naturally quite fertile islands, where, in various places for instance, there is no longer enough land available to /151/ introduce the necessary periods of fallow, (397)

397. Fertilization is still unknown.

and there is therefore relatively little yield, particularly from the yam plants. The increased population can, however, still live well on the products of its planting, (398)

(731) 398. Except for occasional hardship as a result of drought or storms.

even though there is no longer the surplus of products that G. B. Forster, for example, reports (on Nomuka). (399)

S /293 cont./

177
(113)

H. Nevermann, *"Die sudsee und der Kintinent Australien."* in: *Die heutigen Naturvolker im Ausgleich mit der neuen Zeit* /The South Seas and the continent of Australia in: Present-day primitives coming to terms with the new age / edited by D. Westermann. Stuttgart 1940; W.E.H. Stanner, *The South Seas in transition* /cited in English/. Sydney 1953.

S
177 The natives--like the Tongans--seem scarcely changed in essence;
157 European influences were not strong enough to undermine the basic
T
177 nature of the Samoans, especially their pride and self-assurance. The
T
142 physical stature of the majority of Samoans, like that of the Tongans,
S has apparently scarcely changed in comparison with the past; however,
142 in this Archipelago there is a larger group of half-castes, which may
563 be traced to the stronger influence of the whites. Like the Tongans,
S the Samoans in approximately the last three decades have been among
161 the most rapidly increasing population groups of the world. In West
T
(161) Samoa their number increased from 32,601 in 1921 (12)

12. *Department of external affairs, Western Samoa 1947* /cited in English/. p. 58.

to 74, 663 at the end of 1950. (13)

13. *Department of island territories, Western Samoa* /cited in English/ wellington 1951. p. 63.

S
744 /294/ As a result of the efforts of whites there is a change
177 to be noted in public health service, which is perhaps greater than
171 that observed on the Tonga Islands, since in West Samoa, alongside
759 white physicians and trained Samoan medical practitioners /cited
575 in English/, the people themselves are involved in this service in the
form of women's committees /cited in English/; (14)

S
(596)

14. These committees made up of the women of the heads of "extended families" in the villages have, in the last three decades, superseded the old meetings of noble women.

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ABSTRACT

POPULATION, AGRICULTURE AND URBANIZATION IN THE KINGDOM OF TONGA

By

William Fenton Clark

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Prior to this investigation it was believed that alterations in the population profile and agricultural economy of Tonga have resulted in a growing social, economic and nutritional instability throughout the Kingdom. Natural population increase and internal migration have contributed to the urbanization of approximately fifty percent of the nation's total population. Increases in population are also noted to be accompanied by subsequent increases in pressure upon available agricultural acreage, resulting in a growing number of a landless agrarian populace. In addition, increases in the cash income of those Tongan farmers who enjoy secure land tenure have been accompanied by increases in migration to urban areas and absentee landholding. It was hypothesized that these demographic and economic shifts result in a continuation of rapid urbanization and a subsequent growing malnutrition among the urban population. In addition, it was proposed that the increase of cash cropping replacing traditional subsistence agriculture has resulted in a reduction of domestic foodstuff production in ratio to total population requirements and a subsequent dependency upon imported

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[p. i-A]

121 these conditions may be found in many parts of the world such as the
islands which dot the oceans. One such microcosmic situation may
be observed in the Kingdom of Tonga, which is located as an island
chain in the Southwest Pacific Ocean. (Note general mapping of
161 Tonga, Figure 4, Appendix A.)[A] Population growth and diminishing
178 agricultural food production, per capita, as a ratio to total popu-
171 lation, are as serious a threat to national stability in Tonga, as
433 in the more publicized nations of the world. (The reader, if not
-000 familiar with the more basic geographic considerations regarding
Tonga, may, at this point, wish to review Appendix A.)[B]

161 Even though these conditions exist in Tonga, as well as in
178 other populated island groups, it must be understood that while many
171 of the Pacific islands are now facing a land-population growth cri-
174 sis, only recently have these conditions arisen. Anthropological
data indicate that historically the Pacific Basin is a region of
relatively recent human settlement (Harris 1966, p. 13). In the
case of Polynesia, Tonga, Samoa and the Society Islands formed the
core from which the population of other island groups originated
(Emory 1974, pp. 732-745). The Tongas were settled probably no
174 earlier than 1100 B.C. The significance of this situation is that
167 when religious quarrels, conditions of war, or overpopulation arose,
groups of island people migrated to other islands in, seemingly, an
161 ocean of innumerable islands (Harris 1966, p. 14). However, in the
167 twentieth century, uninhabited island groups are no longer to be
found and since 1945, overpopulation has become a growing force,

A[See Category 102, pp. 160-164--Analyst.]
B[See various 13 Categories, pp. 157-170--Analyst.]

161 with little probability of relief. Such is the case in Tonga at
167 the present.

161 With a population exceeding 95,000 scattered over 288 square
miles, Tonga contains areas of rural population density in excess
171 of 600 per square mile. Coupled with a resource base inadequate
433 for significant industrial development, and an economy which is at
present entirely dependent upon agriculture, Tonga often resembles
171 many nations of the "underdeveloped world." However, because of a
growing relationship with the British Commonwealth, a Western form
of government, and a 95 percent literate population, Tonga
resembles many nations of the "developed world." Characteristics of
both "worlds" are found scattered over the 150 islands that comprise
121 the nation. Therefore, here is a laboratory situation in which to
study the critical issue of population growth and urbanization
versus food production.

161 The Tongan population-agricultural imbalance may be reduced
to a simple statement of conditions. Tongan population growth has
171 in recent years stood at over 3.5 percent per year and is today
[161] among the highest of the Pacific islands. (Other island groups of
the region having had high growth rates include Fiji with 3.5 per-
161 cent, Samoa with 3.8 percent, and Tahiti with 3.6 percent.) Con-
ditions in Tonga, as evidenced by the present population growth
rate, indicate that the present population of 95,000 will more than
double by 1990. News items from Tonga predict that this number will
overwhelm the food production capacity of the land ("There's Not
171 Enough Land . . .," 1967, p. 37). Such conditions are not yet so

CHAPTER III

POPULATION AND SETTLEMENT

Historical Development

174 The initial settlement of the Tonga Islands resulted from
southward migrations of Polynesians from Samoa, approximately 3,000
174 years ago (Green and Kelly 1931, p. 64). Pottery fragments and
161 ancient fortifications indicate that settlement was widespread and
that a prehistoric population of approximately 30,000 persons devel-
oped within the islands (Green and Kelly 1931, p. 64; Maude 1965,
174 p. 27). Between this prehistoric period and European contact in
the seventeenth and eighteenth centuries, there elapsed sufficient
time for the population to have expanded beyond this level, even with
only a modest growth rate. This suggests that at some time during
this pre-European period, Tongan population stabilized at a level
175 reasonably in balance with the carrying capacity of the land. This
361 assumption is, in part, confirmed by the writings of Tasman in 1643,
and Cook in 1773, each of whom observed widespread settlement
throughout the islands. Concerning the island of Tongatapu, maps
and descriptions from the seventeenth and eighteen centuries indi-
cate only small scattered areas not included within a system of
native food producing plantations (Green 1973, p. 64).

It appears that the concept of village settlement did not exist in Tonga during this early period of European contact. Tasman

369 Considering the urban characteristics set forth by the South Pacific Commission as being applicable to the Pacific islands, it becomes apparent that the cities of Pangai, Neiafu, and Nuku'alofa can be defined as being urban centers. In the case of Mu'a, though larger than Pangai in terms of population, the lack of such urban characteristics as government, commerce, and economics eliminates it from urban classification, under the South Pacific Commission's definition.

162 Other population groupings of significance include church
795 training facilities and schools. The most important of these are
873 Salote College and Toloa Methodist Training College, sponsored by
874 the Wesleyan Methodist organization, and Liahona High School,
[162] sponsored by the Church of Jesus Christ of Latter Day Saints. Each
of these include several hundred students and staff, many of whom
live in housing provided by the respective schools.

874 Other groupings to be considered within this classification
162 are the training camp for the Tongan defense force and the police
training facility, both on Tongatupa. The population of these two
facilities, though largely transient, must be recognized.

● 161 The historical growth of Tongan population can only be
128 estimated through calculation of approximate numbers supported by
161 approximate tillable acreage. Therefore, figures representing the
128 population prior to the first census (1921) reflect educated guesses
127 supported at times by missionary estimates and head counts (Walsh
1970, p. 31). In addition, none of the censuses prior to 1956 can
161
127 be considered to be entirely reliable. McArthur stated that

161 fluctuations of the population of individual islands "are such as to
127 arouse considerable doubts of the accuracy of either the recording
or summarizing of the data" (McArthur 1968, p. 81).

161 It is generally assumed that an estimated pre-European popu-
lation of 29,700 represents a reasonable figure. This estimate, by
Maude (1965), takes into account the entire Tongan group and will
suffice as a starting point from which a discussion of modern Tongan
[128] population can begin. Table 1 represents a summation of available
population data, beginning with the pre-European period. Although
it is recognized that the historical statistics prior to the 1956
census are primarily estimations, several broad conclusions can be
161 drawn from this table. An overall pattern of population decline
174 and recovery, common to most of the Pacific island groups, is evi-
dent throughout Tongan history. In addition, three contact phases,
following Tasman's initial landing on Tongatupa, are suggested and
supported within the historical population data of Table 1
(Tupouniua 1957, p. 17).

[165] Phase one, from 1643 to 1799, represents the period of
Tongan history for which there are no records "of any large scale
destruction through disease, and internal wars were totally unknown"
(Tupouniua 1957, p. 17). This period began with Tasman's visit and
continued until Cook's last contact with the islands. Due to the
absence of wars and disease, a balanced population with a steady,
if somewhat slow, growth rate can be assumed.

161 Phase two represents the civil war period, from 1800 to
165 1852, a period of "bewilderment and social disintegration marked by

[TEXT CONTINUED ON PAGE 26]

TABLE 1.--Distribution of Population by Island Groups (Percentages).

	Pre-Contact[1]	1840[1]	1891[2]	1921[3]	1939[4]	1956[5]	1966[6]
Tongatapu	43.9	43.2	--	--	--	55.0	61.9
'Eua	2.0	0.8	--	--	--	3.4	4.4
Tongatapu and 'Eua	45.9	44.0	36.6	42.6	46.2	58.4	66.3
Ha'apai	21.9	21.6	28.2	25.2	21.9	17.5	13.7
Vava'u	21.9	21.6	26.5	24.4	24.0	22.0	17.5
Other[7]	10.4	12.4	8.7	7.8	7.9	2.2	2.6
Total Population	29,700	18,500	19,968	24,935	34,130	56,838	77,429

[1] Estimated by A. Maude in Population, Land and Livelihood: The Kingdom of Tonga (Ph.D. dissertation, Australian National University, 1965), p. 27.

[2] Missionary account. Census 1956: 17.

[3] A. H. Wood, History and Geography of Tonga (Nuku'alofa: Government Printer, 1932), Appendix 6.

[4] Census 1956: 41.

[5] Ibid.

[6] Census 1966: 36.

[7] Niuafo'ou and Niuatoputapu. Niuafo'ou had no population in 1956.

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161 a sense of insecurity" (Tupouniua 1957, p. 18). During this phase,
165 internal armed conflict often resulted in large scale loss of life,
destruction of crops, and subsequent famine conditions. It is
estimated that at least one-fourth of the Tongan population perished
during the first half of this period, victims of either war or
[164] famine (Wood 1932, p. 33). In addition, diseases contracted from
Europeans, whose contacts with the islands were increasing in frequency,
produced several severe epidemics. In combination, the war
and disease resulted in a large and widespread reduction of population.

161 Phase three represents a period of "adjustment and recovery,"
dating from 1852 to the end of the century. Recovery, in terms of
population numbers, did not immediately occur. Secondary effects of
the civil war period lasted until approximately 1890 to 1895, or
until large numbers of individuals born after 1852 entered the reproductive
ages.

161 Following the 1890s, the population evidenced a numerical
164 recovery, though periodic outbreaks of disease resulted in an
irregular pattern of increase. For example, an epidemic of measles
[165] in 1893 reportedly killed a "twentieth of the population," while an
influenza epidemic in 1918 claimed as much as a tenth of the population,
161 on some islands (McArthur 1968, p. 96). Nonetheless, the
number of individuals increased from approximately 20,000 in 1891,
to 24,000 in 1918. Following the 1918 epidemic, the Tongan population
exhibited a period of accelerating growth. Between 1891 and
1931, the annual rate of increase was 1.1 percent. This rate

161 increased to 3.1 percent between 1931 and 1956, with the population growing from 28,839 to 56,838 (Kingdom of Tonga: Statistical Abstract 1972, p. 1). This rate of expansion accelerated further during the intercensal period, 1956 to 1966, to reach 3.6 percent. By the time of the 1966 census, the Tongan Kingdom contained 77,429 individuals. This represents a tripling of the 1918 population figure, in less than 40 years. Since 1966, the population has increased by approximately 20,000, and now stands in excess of 95,000.

Data available from the Tongan Department of Justice, and
published after 1966, indicates a decelerating population growth
rate (Table 2). While there exists some speculation as to the
accuracy of this data, it appears that the annual growth rate has
decreased from the intercensal 3.6 percent, to a 1973 level of 2.5
percent (Report of the Department of Justice 1973, p. 9). However,
despite the declining growth rate, a proportional decrease in the
161 yearly numerical increase of the population is not evident. Sta-
163 tistical evidence indicates that greater numbers of the population
are entering the fertile years, thereby offsetting the decreasing
162 rate of growth by maintaining a nearly constant or increasing
number of births. Furthermore, due to the age structuring of the
population, which is decidedly young, more individuals will be
entering the reproductive years in the near future, than will be
leaving it (Table 3).

161 Projection for the future population of the islands differs greatly, depending upon the sources consulted. Therefore, Table 4 (page 29) projects the population for five different growth rates,

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161 TABLE 2.--Crude Birth and Death Rates.

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Year	Registered Births	Registered Deaths	Natural Increase	Per Thousand		Yearly Growth
				Births	Deaths	
1966	2,870	228	2,672	38	3	3.46
1967	2,652	278	2,374	34	4	3.06
1968	2,648	209	2,439	33	3	3.05
1969	2,844	236	2,608	34	3	3.16
1970	2,652	227	2,425	31	3	2.85
1971	2,505	285	2,220	29	3	2.54
1972			2,486			2.74
1973			2,395			2.58

SOURCES: Population Census Reports, 1956 and 1966.

Report of the Department of Justice, 1966-1971 (Nuku'alofa: Government Printer).

Kingdom of Tonga: Statistical Abstract 1972 (Nuku'alofa: Government Printer, 1972), p. 4.

162 TABLE 3.--Population by Broad Age Groups.

161

Age Groups	1956 Census		1966 Census	
	Total	%	Total	%
Under 5	10,031	17.7	14,326	18.5
05 - 09	8,090	14.2	11,546	14.9
10 - 14	6,843	12.0	9,873	12.7
15 - 19	6,045	10.6	7,825	10.1
20 - 24	4,968	8.8	6,219	8.0
25 - 29	4,416	7.8	5,441	7.0
30 - 34	3,537	6.2	4,542	5.9
35 - 39	2,896	5.1	4,154	5.4
40 - 44	2,256	4.0	3,321	4.3
45 - 49	1,782	3.1	2,711	3.5
50 - 54	1,606	2.8	2,064	2.7
55 - 59	1,279	2.3	1,484	1.9
Over 60	3,089	5.4	3,923	5.1
Total	56,838	100.0	77,429	100.0

SOURCE: Kingdom of Tonga, Statistical Abstract 1972 (Nuku'alofa: Government Printer, 1972), p. 4.

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● 161 TABLE 4.--Projected Population Size of Tonga.

Year	Growth Rate, Percent Per Year				
	1.5	2	2.5	3	3.5
1980	104,000	107,500	112,000	117,500	121,000
1990	120,500	131,500	143,500	156,500	170,500
2000	141,500	161,500	183,000	210,000	240,000
2010	162,500	198,000	234,000	281,000	338,000

for the forthcoming 30-year period (1980 to 2010). A growth of 2.5 percent, though not currently met, probably provides the most realistic estimate, though possibly conservative, for long range projections.

Regardless of the estimated growth rate used, one overriding feature becomes apparent when considering Tonga's population history and its projected future. It took approximately 100 years to double the 1840 population figure of 18,500. The 1940 population figure, approximately 35,000, required less than 25 years to double, resulting in 70,000 individuals. Projected growth rates (Table 4) indicate that the population will double again between 1966 and 1990, a period of 24 years.

162 The population composition of modern Tonga is homogenous. 563 As indicated within Table 5, 98 percent of the population is Tongan, while less than 2 percent is composed of other racial elements. 563 [423] [432] Throughout history, Tongan law has consistently forbade the sale of land to non-Tongans. Therefore, this non-native element is primarily

● 161 TABLE 5.--Component Populations of the Kingdom Showing Respective Percentages to Total Population: 1939, 1956, and 1966.

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563

Component Population	1939 Census	1956 Census	1966 Census
Tongans	96.28%	97.04%	98.31%
Europeans	1.17	0.40	0.42
Part-Europeans	1.29	1.06	0.66
All Others	1.26	1.41	0.51
	100.00	100.00	100.00

SOURCE: S. N. Fiefia, Report of the Results of the 1966 Census (Nuku'alofa: Government Printer, 1968), p. 17.

563 concentrated within the urban areas. Of this 2 percent non-Tongan
[162] population, nearly 30 percent are of mixed racial composition, the
563 majority of whom are of Tongan and European descent. The significance
578 of this absence of alien racial elements is the subsequent
171 absence of conflicts of interest between these elements, often evident
in other Pacific island groups (i.e., in Fiji between Fijians
and Indians, and in Tahiti between the Chinese and native Tahitians).

609 The basis for this homogenic feature may, in part, be traced to the civil war period of Tongan history. During this period, evidence indicates an increasing Tongan hostility toward the resident Europeans. The popularized name, "The Friendly Islands," given to Tonga by Cook, became a misnomer as ships and missionaries were attacked. Tales of murder and cannibalism emanated from the voyages of the ships "Duke of Portland" (1802), "Union" (1804),

609 "Supply" (1822), and "Rambler" (1824) (Wood 1932, p. 34). Although the authenticity of these stories may be questioned, they effectively portrayed Tonga as an extremely inhospitable landing for European ships.

648 Following the civil war period, the newly formed Tongan nation successfully maintained its independent status, despite the fact that other Pacific territories became European colonies or possessions. Prior to 1900, various treaties were signed with France, Germany, the United States, and Britain. The British treaty of 1900 designated Britain as the Protecting Power of Tonga, and reconfirmed Tongan independence. This treaty, in effect from 1900 to 1970, insured Tongan independence and shielded the islands from any substantial alien influences.

167 At no time has Tonga experienced large scale influxes of alien population, such as the introduction of alien labor into
144 Fiji, or the Anglo annexation of Eastern Samoa. This has allowed the maintenance of a nearly pure racial complexion in Tonga, with only a very minimum alien entry.

162 A second significant feature of the Tongan population composition is the age structure. This factor is particularly important in terms of projected population growth rate, as well as to
162 future agricultural, urban, and economic planning. An examination
161 of the 1956 and 1966 censuses reveals a significant expansion of the population percentages within the young age groups (Table 3).A A For example, the pre-fertility age group, ages 0 to 14, increased from 43.9 percent of the total population in 1956, to 46.1 percent in

A[See Category 162, p. 28--Analyst.]

162 1966. On the other hand, the reproductive age groups, ages 15 to
161 44, evidenced a decline within each age group, with the exceptions
of ages 35 to 39 and 40 to 44. Further examination of these repro-
ductive age groups indicates, however, that while an overall per-
centage decrease was realized between 1956 and 1966, the absolute
161 numbers within each group increased substantially. This explains
163 why, while the percentage of post-1966 births has decreased, the
total number of births has remained nearly static (Table 2).^A

161 While stable populations develop stable age distributions,
rapidly increasing populations evidence a greater proportion of
younger age groups. The younger groups provide a broad base from
which a large reproductive age group may eventually emerge, with
the potential of even further increasing the birth rate. Tongan
census statistics report a 1966 growth rate of 3.46 percent which
represents one of the largest yearly growth rates in Tongan
history. Since 1966, yearly percentage growth rates have decreased.
However, as the younger age groups reach reproductive ages, Tonga
may experience a resurging population expansion.

168 In order to forestall this continually increasing birth
842 rate, and to establish a more stable demographic profile, the Tongan
government has, since 1955, supported a family planning program.
[647] The medical department of the Tongan Ministry of Health began the
present program of family planning in 1958, with aid from the South
Pacific Commission. Since its initiation, the program has been
extended to all parts of the Kingdom, with varying degrees of
success.

^A[See Category 161, p. 28—Analyst.]

842 Tongan traditions are contrary to the concept of reduced
168 {164 family size. Prior to 1950, high infant mortality motivated pro-
{165 duction of large numbers of offspring. In addition, a large family
represented security for elderly parents. However, with the intro-
161 {165 duction of public health facilities, such as water purification,
{163 infant mortality declined, but without a corresponding decline in
{162 the birth rate. Thus, family size has increased slightly. The
average number of persons per household in 1956 was 6.6, while in
1966 this figure was 6.7.

168 Several of the active religions within the Tongan Kingdom
795 are a second major obstacle to effective family planning. These
842 church groups (Mormon, Free Church of Tonga and Catholic) are outspoken in their opposition to family planning and birth control. Estimates of lay agreement to this opposition vary. The Office of Family Planning in Tonga claims that 18 percent of the Catholic population participates in the program. However, interviews conducted in a cross sampling of the Tongan population indicated a much lower percentage of Catholic supporters. Interviews with Mormon and Free Church members indicated consistent rejection of the family planning project. Despite the fact that the majority of the Tongan population is of Methodist affiliation, the influence of smaller church groups should not be underestimated. The Mormon church mission, for example, has experienced a rapid expansion in all areas of the Kingdom. The potential for a religious-based block to governmental birth control programs is not insignificant (Clark 1974).

166 During interviews with individuals who had migrated to
871 Tongatapu, the most frequently offered explanation for this migration
was the desire for the best education for the children, and a
873 subsequent qualification for careers in government service. Until
368 recently, Tonga's secondary schools were all located on Tongatapu.
Even though secondary schools have now been built on the other
islands, most informants believed that the Tongatapu schools are
871 superior. All such individuals expressed a willingness to temporarily
lower their standard of living, undergo long periods of
family separation or relocate the entire family, in order to
achieve a long range goal of better education.

166 A smaller number of informants migrated to Tongatapu, due
464 to a desire for cash employment in or near the capital. However,
[871] in many cases both motives, education and employment, were
influential.

166 The centripetal force of urbanization, as described by
Fiefia in the 1966 census report, is noted particularly with regard
to younger age groups. "The drift of young people from the atolls
of Ha'apai, especially, and rural areas of Tongatapu to Nuku'alofa
is probably indicative of this trend" (Fiefia 1968, p. 11).

Most of the internal migration is from rural to urban areas,
162 and Nuku'alofa is by no means the only urban area affected. The
166 1956 census listed six settlements, including the capital, with
161 populations in excess of 1,000. With the 1966 report this statistic
had risen to 13. (Table 6 lists these settlements with the respective
intercensal increases.) These 13 evidenced a combined

TABLE 6.--Towns With 1,000 Population and Over Showing the Percentage Increase Since 1956.

District and Town	1956 Population	1966 Population	Percentage	
			Increase or	Decrease
Tongatapu				
Nuku'Alofa including Siesia-Patangata	9,202	15,685	+	70.04
Mu'a	2,560	3,502	+	36.8
Vaini including the Government Experimental Farm	1,064	1,741	+	63.6
Ha'ateiho including Tonga College and Lotoha'apai	1,093	1,473	+	34.6
Fua'amotu including Camp Taliai of the Tonga Defense Force	827	1,343	+	62.4
Haveluloto (Havelu)	292	1,334	+	356.8
Kolonga	866	1,311	+	34.9
Houma	833	1,259	+	51.1
Nukunuku	799	1,078	+	34.9
Ha'apai				
Pangai	1,838	1,670	-	9.1
Hihifo	965	1,005	+	4.1
Vava'u				
Neiafu	2,873	3,593	+	25.0
Leimatu'a	1,004	1,068	+	6.3
Total	24,216	35,922	+	48.3

SOURCE: S. N. Fiefia, Report of the Results of the 1966 Census (Nuku'alofa: Government Printer, 1968), p. 10.

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162 percentage increase of 48.3 percent of the total "urban" population
161 and represented in excess of 46 percent of the Kingdom's population.
166 Nuku'alofa alone accounted for nearly 21 percent of the
162 national population total.

[361] It is important to note that 9 of the 13 settlements
(Table 6) A are in the middle and eastern sections of the Tongatapu
district, the areas where economic and educational activities are
concentrated. These 9 villages represent nearly 60 percent of the
island's population, with Nuku'alofa, alone, accounting for 32.4
361 percent of the total (Fiefia 1968, p. 10). An example of extremely
166 rapid village growth is the case of Haveluloto (Havelu). This
rapid growth is the result of three factors:

1. The proximity of Havelu to Nuku'alofa attracts many people who could not find land within the capital.
2. [366] The relocation of the Tonga Copra Board and the Tonga Construction Company, from Nuku'alofa to Havelu, was accompanied by a subsequent relocation of employees.
3. [368] The construction of a new island hospital within Havelu has attracted many residents.

361 The major road between Havelu's hospital and Nuku'alofa is solidly
491 lined with dwellings.

162 The four remaining villages of over 1,000 population, not
found on Tongatapu, are divided evenly between Ha'apai and Vava'u.
162 Of these, Pangai declined in population during the intercensal
166 period, while the other three registered the lowest percentage
161 increases of the 13 settlements. This statistic indicates that
movement from rural to urban areas was not as influential within

A [See Category 162, p. 38—Analyst.]

161 Ha'apai or Vava'u, as in Tongatapu. This conclusion is supported
162 by the outmovement of population, both rural and urban, from these
166 islands to Tongatapu. In Ha'apai, four villages lost population, while others increased at rates lower than the national average. In Vava'u, one-third of the villages lost population, while only two increased at a rate equal to the national average (Walsh 1970, p. 36).

166 Areas of Tonga most affected by in-migration are portions of 'Eua, owing to the available land, and Tongatapu. In addition to Nuku'alofa and its environs, the east central districts of Tongatapu have been most affected. The Nuku'alofa in-migration is of particu-
166 lar interest. Prior to 1956, the majority of migration to Tongatapu
161 was directed to rural areas. Growth rate of Nuku'alofa during the
162 intercensal period of 1931 to 1956 averaged 5.2 percent, while rural Tongatapu grew at a rate of 6.3 percent. However, the trend altered during the intercensal period of 1956 to 1966. Nuku'alofa, during this period, grew at a rate of 7.4 percent, while rural Tongatapu maintained the rate of 6.3 percent. This, and the preceding statistics, demonstrate the increasing importance of Nuku'alofa and the other major villages, both in terms of population (nearly 50 percent of the nation's total) and the tendency for current migration to Tongatapu to be urban oriented (Walsh 1970, p. 38).

166 Movements to Nuku'alofa and its environs from other areas of Tongatapu were more numerous than in-migration from other islands. This suggests a two-step migratory pattern. Frequently, a migrant from the other islands will settle initially in a Tongatapu village,

166 162 maldistribution of resident population, with over 50 percent now
living on Tongatapu. This situation is compounded by the decreas-
241 178 ing use of arable farmland and a subsequent reduction in the produc-
tion of indigenous foodstuffs (Fox 1972, p. 5).

311 Several Tongan geographic features are influential in the
[133] distribution of the Tongan population. The western chain of islands
in the Tongan group are volcanic and therefore have been settled
only intermittently. These islands, usually smaller in size, are
less densely settled than the eastern coral islands. Factors, such
as the lack of permanent fresh water, and land too steep for anything
beyond scattered cultivation, severely limit their settlement poten-
[133] tial. In addition, occasional volcanic eruptions further deter
settlement. During the civil war period of Tongan history, most of
the western chain islands supported sizable populations. However,
only Niuafo'ou and Niuatoputapu continued to support communities
311 into the twentieth century (Walsh 1970, p. 30). A volcanic eruption
166 on Niuafo'ou in 1946 forced its evacuation and most of the village
[133] population from this island resettled on 'Eua. (Niuafo'ou was
resettled in 1958.) Recent attempts to settle Kao and Tofua in
Ha'apai have met with varied success. Only Tofua appears, at
present, able to sustain a reasonable population. However, plans
and proposals are occasionally presented for the permanent settle-
ment of Late and Koa, also in Ha'apai.

● 161 The concentration of Tongan population within towns and
162 villages is expected to continue to be a significant feature of
166 Tongan population distribution. Similarly, a growth in the number

161 of village communities with populations in excess of 1,000 is
166 162 anticipated, particularly on Tongatapu and 'Eua. The attraction of
'Eua appears to be the availability of land, which motivates the
161 migration of Tongatapu's landless males. Table 7, which includes
162 the distribution of population from the 1921 census, illustrates
the population growth on 'Eua, from 1.4 percent of the total population in 1939 to 4.3 percent in 1966.

311 Another significant factor determining population distribution is proximity to food source. In most cases, this results in
[161] location either near the sea or near cultivated land. Maude, in
his examination of Tongan areas of low and high density, has

161 162 TABLE 7.--Population Distribution.

District	Population 1921	Population 1939	Population 1956	Population 1966
Tongatapu	10,127	15,754	31,264	47,920
Ha'apai	5,976	7,483	9,918	10,591
Vava'u	5,787	8,199	12,477	13,533
Niuatoputapu	791	836	1,254	1,395
Niuafo'ou	1,108	1,378	---	599
'Eua	---[1]	480	1,925	3,391
Total	23,759	34,130	56,838	77,429

[1] Included in the Tongatapu figures.

SOURCE: S. N. Fiefia, Report of the Results of the 1966 Census (Nuku'alofa: Government Printer, 1968), p. 9.

311
161 suggested that a balance between land and sea resources is generally the determining factor (Maude 1965, p. 63).

166 Although it is in close proximity to Tongatapu, in-migration to 'Eua has only recently been of significance. Interviews with residents of 'Eua suggested two reasons for this relative neglect. Passage to 'Eua is often dangerous, owing to the reef which surrounds the island. In addition, there is a marked lack of seafood available to the settlers on 'Eua. However, with the lack of land and the increasing population pressure on Tongatapu, coupled with the availability of land on 'Eua, in-migration is expected to steadily increase.

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427 Population density, in relation to tillable land, is often determined by the degree of willingness on the part of Tongan nobles, to lease their holdings. In eastern and southeastern Tongatapu, large tracts of land lie idle or are used only minimally. However, in other portions of the nation, where landowners have been willing to lease, distribution is concentrated and densities are much higher.

311
[161] Table 8 includes population density statistics for the major districts of the nation. For purposes of discussion, population density can be considered at three levels: (1) uninhabited land, (2) areas of low density, and (3) areas of high density.

Uninhabited areas of the Kingdom are usually those lands which are either unsuitable for cultivation or restricted from cultivation by members of the nobility. The majority of the volcanic formations in the western Tonga chain are included within

101: Clark K-4,5 (1974) 1978 OU9 Tonga OU9

161 TABLE 8.--Population Density of Each Principal District: 1956 and 1966.

162

311

District	1956	1966
Tongatapu	313	480
Ha'apai	490	523
Vava'u	281	304
Niuatoputapu and Tafahi	172	191
'Eua	57	100

SOURCE: S. N. Fiefia, Report of the Results of the 1966 Census (Nuku'alofa: Government Printer, 1968), p. 9.

311 the former category. As mentioned previously, the lack of suitable water sources, coupled with the steep and rocky landscape, pose an effective deterrent to agricultural settlement.

Several important examples of uninhabited coral formations [134] are located within the eastern island chain. Walsh described Uoleva as having never been inhabited and explained that the soil of the island is unsuitable for yam cultivation and "although visited and farmed to some extent, there is no record of permanent settlement" (Walsh 1970, p. 30). Interviews within Ha'apai settlements supported this conclusion in relation to several smaller uninhabited islands of this same island group.

The uninhabited areas of Vava'u are usually small islands which are steep and provide little acreage for productive farming. Also, in Vava'u, which has not experienced significant overcrowding, there has been little need for additional land. Many farmers

101: Clark K-4,5 (1974) 1978 OU9 Tonga OU9

311 recognize that the uninhabited land is available, but continue by stating, "We have enough land."

311 Although Ha'apai and Vava'u include areas of low density
161 population, the majority of this land is located on Tongatapu, also the scene of in-migration, population maldistribution and crowding.
311 While totally uninhabited areas on Tongatapu are few, there are
161 several areas of extremely low density, most often held by the
423 nobility and located within the eastern and southeastern districts.
565 The total amount of land held or controlled by Tongan nobility and/or royalty is unpublished (Rogers 1969, p. 217), and estimates vary
000 from less than 50 percent to 70 percent. However, it is anticipated that population pressure, building throughout the Kingdom and particularly on Tongatapu, will necessitate the end of such land hoarding.

311 Natural factors may also contribute to the low density of a
161 particular area. Maude's assumption of a balance of "land and sea resources" would seem to be the major cause. Though growing population pressure may necessitate a reordering of this concept, at present it appears that a scarcity of seafood correlates highly with low population density on adjacent land areas. This is particularly noticeable in the smaller islands of Eastern Ha'apai, and in areas
[133] of Vava'u. However, the situation in Vava'u is compounded by the inaccessibility of existing resources, owing to reefs and rocky shorelines.

On the other hand, densities which are highest, excluding urban areas, are located within areas where reefs provide an

311 accessible and abundant sea resource. This is true of western
161 Tongatapu and the western sides of the Ha'apai islands, with the reefs of inner Ha'apai being the most productive.

369 Urban areas are by definition high density zones, and
369 therefore need not be defended as such. However, urban density
162 can be examined in relation to size of housing units within the
592 islands. The average size of the Tongan household, as reported in 1966, included 6.7 persons. Recently collected data indicated no significant change in this level. However, the census reported nine villages with households averaging eight persons, and four villages which averaged over nine persons per household. Most of these were located on Tongatapu. Similarly, recent study indicated the average household size in Nuku'alofa to be 7.96; Pangai, 7.55; and Neiafu, 7.42. In addition, more than 63 percent of those households containing three or more nuclear family units were located on Tongatapu.

161 High density rural areas may number more than 2,000 persons per square mile, as in some parts of Ha'apai, while urban densities may be much higher. The average density of the population on inhabited islands, in 1966, was approximately 375 persons per square mile. This represented an increase in overall density per square mile of nearly 100 persons, from 1956 to 1966. However, these statistics are of little significance, unless considered in relation to the Kingdom's available human, natural, and agricultural resources.
128 The following sections, which treat land tenure and agricultural exchange, will rely heavily upon an analysis of these resources, and their critical interrelations within Tonga.

423 neither allotment size has been popular to the point of significantly altering population distribution. While several estates were initially surveyed into 15 acre allotments, most have since been resurveyed to the stand eight and one-quarter acre size (Wood 1932, p. 74).

131 The estimated total land area of the Tongan Kingdom is 184,674 acres, or approximately 288 square miles (Report of the Ministry of Lands and Survey, 1973, p. 14). Approximately 40 percent of this total represents the Tongatapu island group. Vava'u and Ha'apai represent 22 percent and 18 percent, respectively, with the remaining 20 percent being volcanic and largely
161 uninhabitable. Population estimates of 101,608 for 1975, projected in the 1970 economic survey, allow 1.8 acres per person or an overall density of 352 persons per square mile (An Economic Survey
161 of Tonga: 1970, p. 10). However, a breakdown of Tongan districts
162 illustrates the maldistribution of population and land resources. Tongatapu, with over 60 percent of the total population, currently has a ratio of approximately 1 to 1.02 acres per person, and an estimated 1975 population density of 628.8 persons per square mile. Ha'apai, not including Tofua and Koa, shows 0.94 acres per person and a density of 685.6 persons per square mile. 'Eua, on the opposite extreme, contains 4.3 percent of the population, or approximately 4,370 persons. 'Eua is an estimated 33 square miles in size, resulting in a population density of approximately 129 persons per square mile, or 5.0 acres per person (see Table 9).

161 162 TABLE 9.--Population Density, and Acres Per Capita.

	Population 1975 est.	Area Sq. Mi.	Density Per Sq. Mi.	Acres Per Capita
Tongatapu	62,794	99.85	628.8	1.02
Ha'apai	13,890	20.26	685.6	0.94
Vava'u	17,679	44.44	397.8	1.61
'Eua	4,370	33.76	129.44	4.97

SOURCES: Kingdom of Tonga: Statistical Abstract 1972 (Nuku'alofa: Government Printer, 1972), p. 2.

S. N. Fiefia, Report of the Results of the 1966 Census (Nuku'alofa: Government Printer, 1968), p. 8.

An Economic Survey of Tonga: 1970 (Nuku'alofa: Government Printer, 1970), p. 8.

423 As indicated by these statistics, land is often at a premium within Tonga. While the laws provide for an equitable system of land distribution, differences between actual practice and theory in land distribution, in view of population pressure, must be recognized. Of 265 sample household interviews within the Kingdom, 51 percent of 423 the respondents reported to be landless. These individuals indi- 425 cated that the willingness of the estate holder to lease land, as well as Tongan tradition, is frequently a more decisive factor than the 1927 Land Act, with regard to land distribution. Many interviewees suggested that land is rarely acquired in the manner stated by law, but rather through a complex, and apparently corrupt, system 423 of barter and favor buying. This accounts for the fact that a large number of Tongans are landless, while as much as 50 percent of available acreage remains intact within royal and noble estates.

434 (This concept, which is becoming more notable in all segments of
178 Tongan population, is analyzed within the following chapters.)

241 In summary, while many aspects of Tongan agriculture have
178 remained basically unchanged through history, there have been
several significant alterations with respect to population growth,
178 land distribution and cropping practices. The most significant of
434 these changes has been the development of cash cropping and the
[241] subsequent rise in purchasing power of the average Tongan farmer.
[434] An indication of these alterations is the increased incidence of
[262] material items within the household, plus reliance upon imported food
products, such as tinned meat, fish, bread and sugar.

245 The continually good market for copra and coconut products
241 has resulted in many 'apis being planted almost entirely with palms,
[178] and less production of traditional foodstuffs. In addition, in
densely populated areas where food crops are interplanted with palms,
the competition for sunlight, soil nutrients, and moisture insures
significantly lower yields from food plants.

178 Low production yields associated with decreases in soil
241 fertility are frequently the result of the shift to a more continuous exploitative cropping system. This change is stimulated by the
178 Tongan farmer's desire for increased cash income, and by increasing
241 population pressure on land available for cultivation. This popu-
161 lation pressure is intensified by the migration of individuals to
Tongatapu from the other island groups, especially Ha'apai. The
Tongan situation is becoming increasingly intensive, with often a
crop/fallow period ratio of one to one, and a supported population

241 density in excess of 600 persons per square mile, in some regions.
178 Surveys determining fallow periods evidenced a marked decrease in
161 fallow time in Ha'apai and densely settled portions of Tongatapu,
241 and a subsequent lengthening of the cropping cycle. In many cases,
cropping is continuous, considering the frequent practice of
sparsely planting fallow acreage with tubers.

241 The use of fertilizers necessary in offsetting the nutrient
242 depleting effect of intensive cropping is not financially feasible
nor understood by the typical Tongan farmer. The issue of maintaining soil fertility is of critical concern to the few agricultural and soil technicians in Tonga. However, owing to prohibitive cost, scarcity, and lack of knowledge, it is expected that most Tongan farmers will continue to rely upon the fallow system for replenishing soil nutrients.

241
244 The problems of soil fertility and land availability in
178 Tonga have resulted in the increased cultivation and household
[262 reliance upon taro and cassava as major food staples.[1] Cassava
represents the best example of the variation in food cropping
241 brought about by increasing pressure upon the land. In a status
244 ranking of tubers grown in Tonga, cassava is found at or near the
bottom. However, even though the least desirable, cassava is the

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[1] Both tubers were introduced into Tonga in the nineteenth century, although a variety of taro was cultivated in Tonga prior to that period. The introduced taro varieties are more tolerant of dry, upland conditions, as opposed to the marsh requirements of the earlier species. Today most taro is cultivated without a marsh environment. Cassava is an introduced food crop. Of the cultivated tubers, cassava is lowest in status and its increasing cultivation is due to necessity, rather than any growth in popularity.

CHAPTER VI

AGRICULTURE TO URBANIZATION

369 Urbanization and its effects are issues confronting all
171 the governments in the Pacific islands. Of the principal Polynesian
cities, only Pago-Pago in Eastern Samoa evidenced a decrease in
urban population between the mid-1960s to 1975, a result of migrations
to Honolulu and San Francisco. The remaining cities of the
region are coping with the increasing numbers of individuals
121 migrating from villages and rural areas. Thus, urbanization, as
defined by the South Pacific Commission and applied to Tonga (see
pages 21-22) must be examined in relation to those factors motivating
population movement from rural to urban centers. A
fallacious assumption examines urban growth as a product of the
city when, in fact, "it must be viewed as stemming from forces
369 working on the whole of society" (Harr'e 1973, p. 11). Urbanization
in Tonga results from both urban and agricultural societal
forces. Although three urban centers in Tonga are recognized,
Nuku'alofa exemplifies the process of urbanization in Tonga and
will be used as a model in the following discussion.

369 The steady and accelerating growth of Nuku'alofa, particularly
162 notable in the past 40 years, has been generally an uninterrupted
161 process. In 1937, the capital contained 4,000 inhabitants.

369 By 1956, this figure had increased to 9,200, and by 1966, to nearly
162
161 16,000 not including surrounding areas. Today, Nukú'alofa,
including the adjoining settlements, contains between 25 and 30
369 thousand persons. This number represents approximately half of the
162 population of Tongatapu and a quarter of the nation's total
population.

369 Nuku'alofa is not unique in these respects as many of the
171 same features of growth are common throughout Polynesia. However,
[166] unlike other Pacific cities, Nuku'alofa is almost totally unprepared
to absorb the continuing flow of 600-1,000 new inhabitants per year.
369 The city lacks strong local government and laws, contains inadequate
[364] water and drainage facilities, refuse collection, and sewage systems,
[464] all necessary for coping with a sizable population. In addition,
there are few opportunities for steady urban employment and,
therefore, many persons are underemployed semi-subsistence agricultural workers dependent upon the production of others.

369 In these respects, one could justifiably argue that
361 Nuku'alofa is not an urban settlement, in the true sense, but
merely an agglomeration of three agricultural villages (Kolomofo'ou,
[368] Ma'ufanga and Kolomotu'a). The merging of these three villages
into one urban area resulted from the establishment of the royal
seat of power and the Wesleyan church headquarters at this location, plus the fact that Nuku'alofa was Tonga's first international
369 port. The urban center of Nuku'alofa remains highly agricultural
[368] in nature. The city has acquired few new facilities other than
[166] those usually associated with administration and trade. Three

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A

369 areas and in amusement facilities. This situation^ is often blamed
674 for the rapid rise in crime in Nuku'alofa. Burglary is the most
[178] frequent offense, although the incidence of fighting, prostitution, and petty theft have recently evidenced significant increases. Subsequently, this continuous migration of young Tongans has become a concern at all levels of government in the Kingdom (Report of the Department of Justice 1973).

369 The most influential urban factor attracting rural indi-
166 viduals to Nuku'alofa is the opportunity of improved education.
871 Nearly all of the secondary schools are on Tongatapu and most of
[368] these are in Nuku'alofa. The fact that substantial education is usually unnecessary for village life, and that there are few opportunities for gaining urban employment, is of little consequence in deterring this desire. As mentioned previously, families often entirely abandon their village residence in order to move into
166 the city and acquire a better education for the children. Fre-
[871] quently, this migration is intended to be temporary. However, as the older children finish their education, the younger children begin. In addition, the older children often marry and, as a result,
871 permanent residency is established. Tongans perceive education to
555 be symbolic of prestige, even though the knowledge gained will be put to little use. Educational attainment is considered to be the simplest and most direct means to upward social movement.

166 The rural factors contributing to expanded urbanization are
241 almost entirely related to the system of land tenure and agriculture.
[369] Pressure of population upon land resources has been shown to exist
[161] A[i.e., the high incidence of unemployment among youths in urban areas--Analyst.]

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241 in varying degrees throughout the Kingdom, though it is greatest
161 in Ha'apai and portions of western Tongatapu. As population pressure
increases and maintaining a living through agriculture means becomes
more difficult, migration from these regions can be anticipated.
241 Related to this issue are the decreasing agricultural yields result-
ing from lower fertility levels, shorter fallowing periods and the
[166] expansion of cash cropping. When cash cropping profits become sub-
stantial enough to support a given household, independent of large
scale home food production, the motivation for migrating to an urban
area is high. Such migration results in absentee landholding and the
utilization of friends or relatives to harvest the cash crop. Thus,
agricultural acreage is removed from domestic food production, and
369 allocated to cash crop production. The cash earnings are used to
511 maintain the household in the urban environment. Consequently, the
family experiences an increased dependency upon a greater propor-
tion of foreign imports in order to satisfy its food and material
369 needs. The effects of this are currently being felt in Nuku'alofa,
433 a direct result of too many urban consumers being served by too few
[457] rural producers. The Kingdom is operating under an increasing trade
deficit in order to supplement native food production with imports
(Table 20).[A] Eventually, this will necessitate major adjustments in
the national economic profile.

369 Migrating to an urban area such as Nuku'alofa often increases
554 the social position of the household. Urban living is perceived as
[166] being synonymous with an improved standard of living, while agricul-
tural employment is considered to be a lower prestige occupation.

[A] [See Category 457, p. 124--Analyst.]

[TEXT CONTINUED ON PAGE 125]

Malnutrition was
146 further reported to be the fifth leading cause of death among young
165 in-patients at Vaiola hospital on Tongatapu in 1971 (Jansen 1973,
p. 3).

146 It is probable that borderline malnutrition, or at least
undernourishment, has existed in the South Pacific to some degree
[161] since the influenza epidemic of 1918. Rapid population growth has
been prevalent and unabated since that time. The situation in such
369 urban environments as Nuku'alofa is becoming serious with regard to
511 nutrition and general well-being. The high cost of living and
146 underemployment, aggravated by the overflow of unskilled or semi-
skilled laborers, has resulted in a subsequent increase in the
number of malnourished children. Foods such as yam, fresh fish and
fruits which traditionally were eaten by all Tongans are now, for
many families in Nuku'alofa, a luxury beyond their economic means.
369 Money secured through cash cropping, relatives or overseas remit-
511 tances often is insufficient to support a large urban family and
146 migrating relatives. Jansen (1973) concluded that under prevailing
conditions,

> two points must be kept in mind: a. in spite of socio-economic progress, technology, better education, etc., many children in the Pacific Islands actually die because they lack proper food; b. the survivors may be permanently stunted in physical, and possibly mental, development (Jansen 1973, p. 43).

121 In the present investigation, the incidence of protein mal-
125 nutrition or undernourishment was of prime interest. Throughout the
sample survey, children of preschool age groupings (here defined as
2 years 0 months to 5 years 0 months) were examined. Data presented

101: Clark K-4,5 (1974) 1978 OU9 Tonga OU9

CHAPTER VIII

CONCLUSION

Summary

121 The objectives of this research were threefold:

1. To assess alterations in the population profile of Tonga (i.e., natural increase, internal migration and urbanization).
2. To determine the influence of population growth, land tenure and the development of cash cropping upon the agricultural economy of Tonga.
3. To determine the degree to which urbanization has altered the nutrition status of the Tongan people.

Prior to fulfilling the above objectives, it was hypothesized that:

1. Increases in population are accompanied by subsequent increases in (a) pressure upon agricultural lands, (b) population migration, and (c) urbanization.
2. Increases in cash income among agricultural producers are accompanied by subsequent increases in migration to urban areas, and decreases in agricultural production of food crops in ratio to total national population.
3. Increases in urbanization are accompanied by subsequent increases in reliance upon imported foodstuffs, and decreases in domestic food production and nutritional status.

Data acquired during field investigations supported the above hypotheses. A condition of increasing urbanization in Tonga was found to be the result of (1) natural population growth within

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369 urban areas, (2) displaced individuals migrating due to increased
161 population pressure on agricultural land, and (3) migration of
166 those rural individuals with sufficient income from cash cropping
178 enterprises. (The above is summarized within Figure 2).

178 Despite increases in the absolute quantity of domestic food
121 production, research results indicated that population growth more
241 than nullifies these gains. This situation is aggravated by the
withdrawal of acreage from domestic food production resultant from
(1) expanded cash cropping, and (2) increasing absentee landholding.
[439] The ensuing gap between population and domestic food needs
requires that Tonga import large quantities of foodstuffs (Table 20).[A]

121 Further investigation revealed that the consequences of
178 urbanization in Tonga are (1) decreased domestic food production
146 per capita, and (2) retarded physical development of preschool
369 children most likely due to inadequate dietary quality, as shown
121 in Table 21, and Table 28 (p.188).[B] However, in order to strengthen
the reliability of the preceding hypotheses, it is recommended that
they be tested in relation to alternative societies.

Implications

241 The Tongan social structure and systems of land tenure and agriculture, in combination with expanding urbanization, require that Tongan governmental officials realize the vital role of agriculture in the Tongan economy. To date, the Kingdom lacks any other alternative resources. Thus, care must be taken to stabilize and revitalize agriculture and domestic food production.

A [See Category 457, p. 124--Analyst.]
B [See Category 146, p. 136 and 188--Analyst.]

101: Clark K-4,5 (1974) 1978 OU9 Tonga OU9

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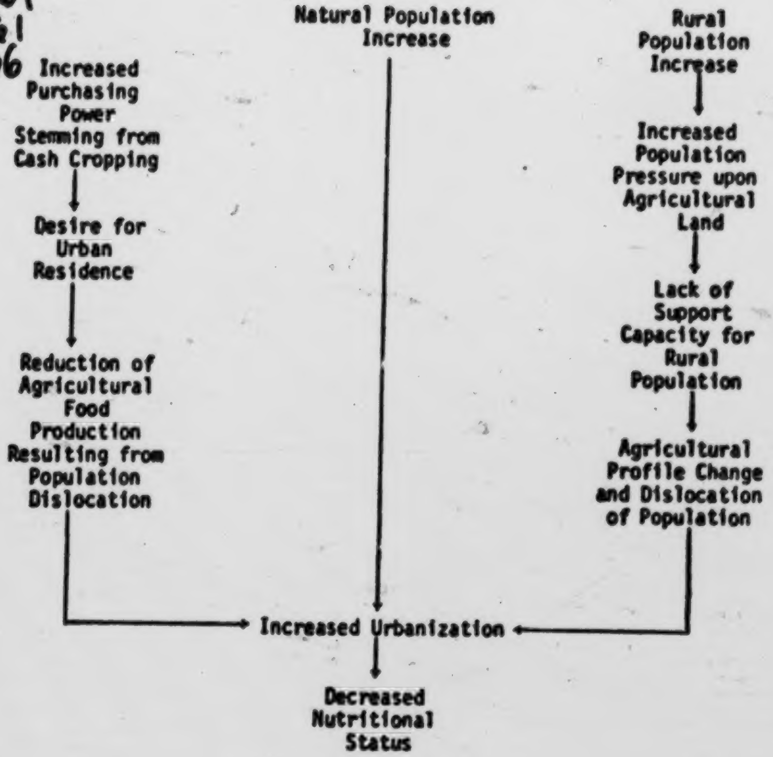
Natural Population Increase
Increased Purchasing Power Stemming from Cash Cropping
Desire for Urban Residence
Reduction of Agricultural Food Production Resulting from Population Dislocation
Rural Population Increase
Increased Population Pressure upon Agricultural Land
Lack of Support Capacity for Rural Population
Agricultural Profile Change and Dislocation of Population
Increased Urbanization
Decreased Nutritional Status

Figure 2.--Urbanization: Kingdom of Tonga

APPENDIX A

GEOGRAPHICAL SURVEY OF TONGA

131 The islands comprising the Kingdom of Tonga are scattered through 8°30' of latitude, from 15° South to 23°30' South, and 4° of longitude, from 173° West to 177° West. Directionally, the Kingdom is located East of Fiji and South of Samoa (Harris 1966, p. 124). The total area encompassed by the Kingdom is over 20,000 [361] square miles. However, of this area only 288 square miles are land and this amount is scattered over 150 islets of which only 45 are [162] inhabited (Kennedy 1968, p. 22). The largest and most populated island of the Kingdom is Tongatapu which accounts for 99 square 161 miles and holds a population in excess of 50,000. Estimates of Tonga's total population vary from 80,000 to 100,000. However, sources within the nation give the total as of January 1, 1975, as 95,000 (Report of the Ministry of Health 1973, p. 26).

133 The islands of Tonga lie in two fairly parallel lines and are actually the tops of two undersea mountain ridges. The basic orientation is Northeast to Southwest with several notable outliers in the Northwest of the Kingdom's territorial limits. These outliers include the islands of Niuatoputapu and Niuafo'ou (Kennedy 1968, p. 22).

Physically, the geography of the islands is not uniform. There are three divisions of islands by geologic type (Figure 3).

[TEXT CONTINUED ON PAGE 165]

137 These islands are remarkable for their fertility and the variety
134 of their vegetable productions, abounding in fruits indigenous to
tropical climates, such as the cocoa nut, bread fruit, banana, pine
137 apple, orange, citron, lime, custard apple, and others. Yams, melons,
and pumpkins are also very plentiful, and of excellent quality.

161 The population of all the groups is estimated by the missionaries
at about 50,000; that of the Island of Tongatabu is said to
162 be about 9000, of which 5000 are Protestants, 600 Roman Catholics,
795 the rest remain in their old faith.

The government of the islands is despotic, and not hereditary,
643 but elective in the royal family. The eldest son of the king does
[642] not necessarily succeed his father, but another may be chosen from
the sons of a former king, or a younger son may be elected before
an elder if he be thought to have more capacity for government.

644 There are some individuals connected with the priesthood, who
554 are considered superior in rank to the kings, and to whom the kings
[643] do homage. The Tamahá is one of these, and is considered to be
descended from the gods. The present Tamahá is a very old
woman, quite blind, who remembers the visits of Captain Cook,
and, although a Christian for many years, she still retains her rank
as the first person in the Tonga Islands.

643 George, the present King of the Friendly Islands, has only been
ruler over the whole of the three groups, composing them, since the
[634] year 1845. Before this he was King of the Haabai group only,
Josiah Tubou being King of Tonga, and Feenau King of Vavau.
When Feenau died, George became King of Vavau as well as
of Haabai, and Josiah, King of Tonga, dying in 1844, George
became Tui Kanokubolu, and now reigns over the whole of the
Friendly Islands. He has professed Christianity for about twenty-one years.

122 The Meander, Captain Keppel, sailed from the Bay of Islands,
New Zealand, on the 10th of June, 1850.

At daylight in the morning of the 19th we made "Eua," an island situated on the eastern side of Tongatabu; and soon afterwards the tops of the cocoa-nut trees upon Tonga itself were seen along the horizon to the westward.

At 8·30 A.M. we fired two guns, and kept away N.W. by W., steering for an opening between Tongatabu and a small islet called in the chart Eua-Eki.

123 Upon nearing the eastern side of Tongatabu, very heavy rollers
were seen along the shore of the island, the surf upon the reefs being thrown up to a great height, the scrub being all beaten down, and the cocoa-nut trees appearing further inland than in other places. Seeing no canoes or natives, we fired a third gun, and shortened sail to topsails, sending up the colours and the signal for a pilot. Soon afterwards a canoe was observed coming off, and the ship